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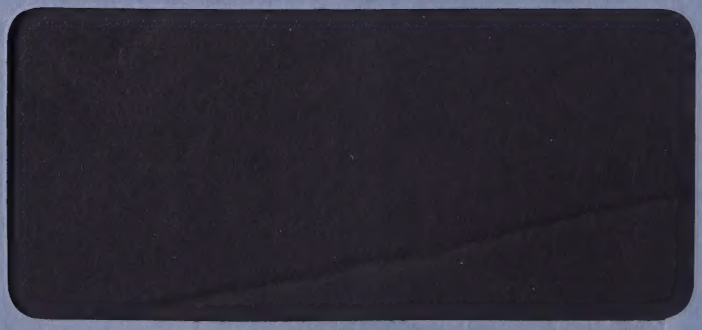
INTELLIGENT OSCILLOSCOPE

VP-5516A

SERVICE MANUAL



INTELLIGENT OSCILLOSCOPE

VP-5516A

SERVICE MANUAL

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2. SPECIFICATIONS

2.1 Vertical Axis

Sensitivity:		
CH1 and CH2:	2 mV/div to 5 V/div, 11 ranges in 1-2-5 steps	
CH3 and CH4:	2 ranges of 0.1 and 0.5 V/div	
x2 magnification:	Sensitivities of CH1, CH2, CH3 and CH4 are magnified by x2	
	VOLTS/DIV values are displayed on the screen.	
Accuracy:	+15°C to +35°C	0°C to +50°C
x1:	±2%	±3%
X2:	±5%	±6%
Variable control:	Continuous up to 2.5 times of VOLTS/DIV value non-calibrated (CH1 and CH2)	
CH2 SIGNAL OUT:	10 mV/div ±10%	
Frequency band and rising time (Tr):	Frequency band	Calculated Tr
CH1 and CH2:		
2 mV/div:	DC to 50 MHz	Tr≦7 ns
5 mV to 2 V/div:	DC to 100 MHz	Tr≦3.5 ns
x2, 1 mV to 1 V/div:	1/2 of the above	
CH3 and CH4:		
0.1 or 0.5 V/div	DC to 100 MHz	Tr≦3.5 ns
CH2 SIGNAL OUT:	DC to 10 MHz	Tr≦35 ns
	Measured with signal impedance of 25 Ω, vertical amplitude of 6 div and VARIABLE control at the CAL position.	
Input impedance:	1 MΩ ±2%, 22 pF ±3 pF	
Maximum input voltage:	200 V (DC + ACpeak), 10 seconds or less	
Input coupling:		
CH1 and CH2:	AC, DC or GND	
	DC coupling for CH3 and CH4.	
Operation mode:	CH1, CH2, CH3, CH4 or ADD (mathematics addition of CH1 and CH2)	
	CHOP or ALT selectable for multiple traces	
Bandwidth limitation:	DC to 20 MHz (-3dB) or less	
CHOP switching frequency:	500 kHz ±30%	

Hold-off function: Hold-off time is continuously variable up to 4 times.

Sweep Auto Range: A range that a normal A sweep has at least one cycle is automatically selected according to input signals.
Frequency range: 50 Hz to 100 MHz

Magnified sweep: 10 times. Minimum sweep time of 2 ns/div possible. The central waveform is magnified 10 times.

Accuracy: 1% larger than sweep times in the normal mode.

Linearity:	+15°C to +35°C	0°C to +50°C
0.2 µs/div to 0.5 s/div	±2%	±3%
20 ns/div to 0.1 µs/div	±3%	±3.5%

Accuracy and linearity are measured within the central 8 divisions of the screen, excluding the following portions:

- 0.25 div from the sweep starting point.
- 50 ns from the sweep starting point.
- Waveform portion exceeding 100 div from the sweep starting point.

2.4 Delayed Sweep

Delay time (DLY): 0.5 µs to 5 s (A VARIABLE control set to CAL)
Current delay time setting shown on the screen.
The delay time range is between 0.2 div and 10 div from the A sweep starting point.
Effective in ranges between 0.5 µs/div and 0.5 s/div.

Delay time accuracy:	+15°C to +35°C	0°C to +50°C
0.1 s/div to 0.5 s/div	±3%	±5%
0.5 µs/div 1 µs/div to 50 ms/div	±2%	±4%

Accuracy is calculated with the following:
±[e% of reading + 1% of full-scale time + 50 ns]
Where: e% is the values listed above.

Delay jitter: 20.000: 1 or less
(A sweep: 1 ms/div, B sweep: 1 µs/div)

2.5 3D Function	Repetitive triggered delayed sweep of composite TV line signal during the A sweep period. Display system is ALT. Delay signal is shifted to lower screen as it is repeated. Maximum repetition cycles: 255
2.6 X-Y Operation	
Input terminals and operation	CH1 is the X axis and CH2, CH3 and CH4 are the Y axis. For X-axis positioning, the horizontal POSITION control is used, and CH2, CH3 and CH4 POSITION controls are used for Y-axis positioning. Multiple traces are displayed in the CHOP switching system.
Sensitivity:	
CH1 and CH2:	2 mV/div to 5 V/div, 11 ranges in 1-2-5 steps
CH3 and CH4:	2 ranges of 0.1 and 0.5 V/div
	VOLTS/DIV values are displayed on the screen.
Accuracy:	+15°C to +35°C / 0°C to +50°C
X axis:	±3% / ±4%
Y axis:	±2% / ±3%
	VARIABLE control set to CAL.
Input impedance:	1 MΩ ±2%, 22 pF ±3 pF
X-Y phase difference:	3° or less in a range from DC to 1 MHz
2.7 Z Axis	
Sensitivity:	A 5 Vp-p positive signal makes the waveform dark.
Frequency range:	DC to 20 MHz
Input impedance:	Approx. 47 kΩ
Max. input voltage:	50 V (DC + ACpeak)

2.8 Calibration Voltage

Waveform:	Square-wave (positive polarity) Waveform ratio: 50% ±5%	
Voltage accuracy:	+15°C to +35°C	0°C to +50°C
(1-MΩ load)	0.3 V ±1%	0.3 V ±1.5%
Frequency:	1 kHz ±10%	

2.9 CRT Readout

Vertical section:	CH1, CH2, CH3 and CH4 V/div Automatic or manual conversion according to probe used (x1, x10 or x100). Automatic conversion in FINE or x2 MAG. AC, DC, GND, INV, BW and UNCAL Digital displays in numerals and/or symbols.
Horizontal section:	Automatic conversion according to A and B s/div (x10) settings. Delay time and UNCAL, A/B trigger source, A/B trigger coupling and A/B trigger slope. Digital displays in numerals and/or symbols.
Menu:	Error messages Measurement guidance, label display, channel numbers, cursor names, ground and trigger level messages appear on the screen.
Cursor:	Voltage cursor lines (V1 and V2) Time cursor lines (T1 and T2) Ground cursor lines (CH1 and CH2) Trigger cursor lines (A and B trigger) Peak cursors (+ and -)
Cursor measurement:	Voltage, time, frequency, phase difference, channel subject to cursor measurement and movable cursor are indicated.

Label:

Number of letters: Max. 50 letters

Position: Within effective screen area (8x10 divisions)

Letter types: 42 types

Numerals: 0 to 9

Capital alphabet: A through Z

Symbols: +, -, *, /, . and (space), 6 symbols

Display: Max. 16 lines, 31 letters per line

TRACE IDENTIFY: Channel and cursor names are indicated at desired positions which shift as corresponding cursor lines move.

Shifting unit: 1 character

Display: Within 16 lines on the screen

Shifting range: ±8 lines from ground level

Letters displayed: CH1A, CH1B, CH2A, CH2B, V1, V2, T1, T2, 1G, 2G, A, B, CH3A, CH3B, CH4A and CH4B

CH3A to CH4B messages do not shift with cursor lines.

2.10 Menu Mode

Cursor measurements:

GND-V (voltage): Voltage from the ground level

Accuracy: ±[0.8% of readout + 3.12% of full scale]

ΔV (potential difference): Potential difference between 2 cursors

Accuracy: ±[0.8% of readout + 2% of full scale]

ΔT (time difference): Time difference between 2 cursors

Accuracy: ±[1% of readout + 0.8% of full scale]

1/ΔT (inverse of time): Inverse time difference between 2 cursors

Accuracy: ±[1% of readout + 0.8% of full scale]

PHASE (phase difference): Phase difference at optional div=360°

Accuracy: ±[1% of readout + 0.8% of full scale]

X-Y (phase difference): Phase difference at optional div=90°

Accuracy: ±[1% of readout + 0.8% of full scale]

Tr (rising time):	Indication of rising time
Tf (falling time):	Indication of falling time
Accuracy:	±[1% of readout + 0.8% of full scale]
Cursor shift:	2 types (fine or rough adjustment)
Cursor shift range:	
Voltage cursor:	0 to 7.992 div
Time cursor:	0 to 10 div
Peak detection:	
TRACE:	Sequentially indicates ±peaks of A and B sweep waveforms.
MAX:	Maximum values of ±peaks of A and B sweep waveforms are held and indicated.
Accuracy:	±[0.8% of readout + 10% of full scale]
Frequency bandwidth:	TRACE: 100 Hz to 3 MHz MAX: DC to 3 MHz
YES-NO judgment:	Input waveform is judged against optionally set voltage cursor lines.
Accuracy:	±[0.8% of readout + 10% of full scale]
Frequency bandwidth:	DC to 3 MHz
	Peak detection and YES-NO judgment: Measurements are conducted against sinewaves in CH1 or CH2 signal trace mode with NORM triggering. Measurement in B sweep must be with the following conditions: 1. Repetition cycles of A sweep: 6.5 ms or less 2. B sweep time must be 1/10 or more of A sweep time.
Ground level:	
Cursor shift range:	0 to 7.992 div
Positional accuracy:	±0.2 div
Trigger level:	A and B trigger
Cursor shift range:	±4 div. Trigger coupling must be DC. Ground and trigger level: Only for CH1 and CH2. Automatic calibration must be applied in SELF CAL. Measurements are conducted using 1-kHz sinewave.

REF WAVE:	Peak sampling is conducted to input waveform is and data stored.
Memory capacity:	128 bytes
Resolution:	7 bits or more
Frequency bandwidth:	DC and 5 kHz to 1 MHz Measurements are conducted using sinewaves. A sweep time range: 0.2 ms/div to 0.5 µs/div

2.11 Power Supply

Voltage:	90 V to 112 V
Frequency:	48 Hz to 440 Hz
Power consumption:	Max. 100 VA

2.12 CRT

Type:	Rectangular with internal graticles
Acceleration voltage:	Approx. 17 kV
Effective area:	8 x 10 divisions (1 div: Approx. 10 mm)

2.13 Operating Conditions

Operating temperature:	0°C to +50°C
Operating relative humidity:	20% to 80%
Storage temperature:	-20°C to +70°C
Storage relative humidity:	20% to 80%

2.14 Size and Mass

Dimensions:	Height (mm)	Width (mm)	Depth (mm)
Max. dimensions (accessories included):	210	365	520
Main body only:	160 ±3	310 ±3	455 ±3
Mass:	Approx. 10 kg		

2.15 Impact and Vibration Resistance

Withstands the following tests. Repeating the following test twice may cause partial damage.

Vibration test:

Total vibration width: 0.6 mm

10-55-10 Hz sinewave vibration is sweeped for 1 minute.

Above tests are conducted in 3 directions, 15 minutes for each direction.

Total 54-minute test with 55 Hz fixed vibration, 3 minutes in each direction.

Impact test:

One edge of testing instrument is lifted 10 cm from rigid, flat wooden floor, then dropped (3 times each edge, total 12 times).

Drop test:

Conducted after packing for shipment.

A package is dropped from 35-cm high from one corner, 3 adjacent edges and 6 surfaces (total 10 times).

2.16 Accessories

Probe (10:1):	2
Spare fuse 1.6AT:	1
Graticule illumination lamp:	1
Power cord:	1
Operation Manual:	1

The front cover, special cart, adaptor with T-12K ground and close-up camera are available as options.

3. CIRCUIT DESCRIPTION

3.1 Vertical Axis

Since CH1 and CH2 input attenuators are identical, CH1 circuit only is described. Figure 3-1 shows the schematic block diagram of the CH1 input attenuator.

3.1.1 Input Coupling

The input signal from the input terminal first enters the AC/DC/GND switching circuit. In the DC coupling, the input signal is fed to the high-impedance attenuator via R11//C11 and R14//C14. In the AC coupling, it is fed to the high-impedance attenuator via R11//C11 and the serial circuit of R13//C13 and C12. Capacitor C12 removes the DC components of the input signal.

In the GND coupling, the high-impedance attenuator input is connected to the ground and the input signal path is open. In this coupling, the ground level can be checked without removing the input signal from the input terminal.

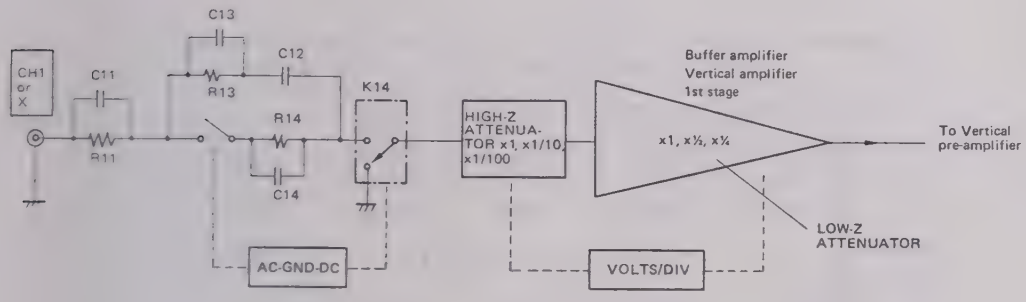

Figure 3-1 CH1 input attenuator block diagram

Attenuator Combination:

The vertical axis deflection sensitivity is determined by the attenuator switch setting of that channel. The reference range of the VP-5516A is 5 mV/div.

When attenuator switch is set to a range greater than 5 mV, the accurate voltage divider with compensated frequency characteristics is connected to the signal path. The input signal is divided before supplying to the latter stage. The range setting is displayed on the lower screen.

The CH1 and CH2 high-impedance attenuators have x1, x1/10 and x1/100 circuits and their low-impedance attenuators contain x1, x1/2 and x1/4 circuits. These circuits combined according to the range setting.

Accurate attenuation ratio is ensured for the selected range at the bandwidth of 100 MHz. The input impedance of each range is 1 MΩ//22 pF, which is the same as that of the 5 mV/div reference range.

The x1/100 and x1 (front stage) and x1/10 and x1 (rear stage) voltage dividing circuits are cascade connected in the high-impedance attenuator. These circuits are turned on or off by means of relays according to range setting as shown in Table 3-1.

Table 3-1 High-impedance attenuator combination

Volts/div	Front stage		Rear stage	
	×1/100	×1	×1/10	×1
2 mV	OFF	ON	OFF	ON
5 mV	OFF	ON	OFF	ON
10 mV	OFF	ON	OFF	ON
20 mV	OFF	ON	OFF	ON
50 mV	OFF	ON	ON	OFF
0.1 V	OFF	ON	ON	OFF
0.2 V	OFF	ON	ON	OFF
0.5 V	ON	OFF	OFF	ON
1 V	ON	OFF	OFF	ON
2 V	ON	OFF	OFF	ON
5 V	ON	OFF	ON	OFF

The high-impedance attenuator consists of a printed circuit board (PCB) which has relays and a PCB which have electromagnetic devices that drive relays. The compact, lightweight attenuator is driven by +5V from the power supply and logic signals.

The low-impedance attenuator consists of three stages of x1, x1/2 and x1/4 circuits, which are located inside the buffer amplifier and switched by relays. These circuits are turned on or off according to range setting as shown in Table 3-2.

Table 3-2 Low-impedance combination (inside the buffer amplifier)

Volts/div	Low-Z Attenuator		
	×1	×1/2	×1/4
2 mV	ON	OFF	OFF
5 mV	ON	OFF	OFF
10 mV	OFF	ON	OFF
20 mV	OFF	ON	ON
50 mV	ON	OFF	OFF
0.1 V	OFF	ON	OFF
0.2 V	OFF	ON	ON
0.5 V	ON	OFF	OFF
1 V	OFF	ON	OFF
2 V	OFF	ON	ON
5 V	ON	OFF	OFF

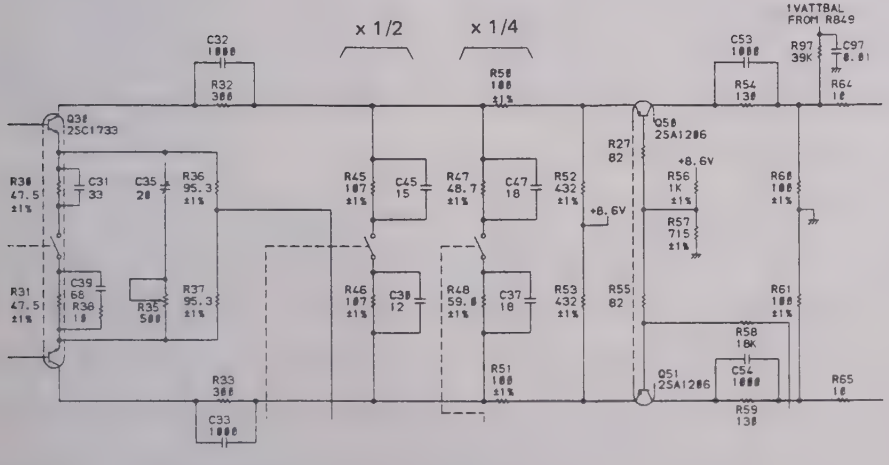

Figure 3-2 Low-impedance attenuator inside the buffer amplifier

3.1.2 Vertical preamplifier

Since CH1 and CH2 preamplifiers are identical, with exception that CH2 has the polarity switching circuit, CH1 only is described. Figure 3-3 shows the schematic block diagram of the CH1 vertical preamplifier.

The signal is fed to the buffer amplifier, which mainly consists of transistors Q30, Q50 and Q51, after Q20 FET (field-effect transistor). This stage acts as the x1 amplifier, which includes the low-impedance attenuator and switches between 5 mV/div (x1), 10 mV/div (x1/2) and 20 mV/div (x1/4) range settings. K30 is installed to achieve 2mV/div range setting. Variable resistor R89, STEP ATT BALANCE, is used for rough adjustment and fine adjustment is conducted by the CPU via R97.

The second stage consists of transistors Q60, Q80 and Q81. This stage contains R72 which adjusts the amplification factor for the reference range and FET Q70 which continuously changes the vertical deflection (Variable). The Variable Balance is adjusted by the CPU via U90. The CH1 trigger signal is obtained from emitter followers Q90 and Q91.

The third stage consists of transistors Q201, Q202, Q205 and Q206. The position control circuit is installed in this stage. The signal from R2237 drives Q203, Q204 and U100.

The signal after the third stage is fed to the diode gate which consists of CR401 through CR404 and switches the channel. The diode gate is connected to CH1, CH2, CH3 and CH4 preamplifier outputs. The desired channel is activated by turning on or off the gates. The signal of the selected channel is fed to the delay line via Q440 and 441 of the delay line drive circuit. Transistors Q460 and Q461 which extract the NORM trigger signal is connected to the delay line drive circuit.

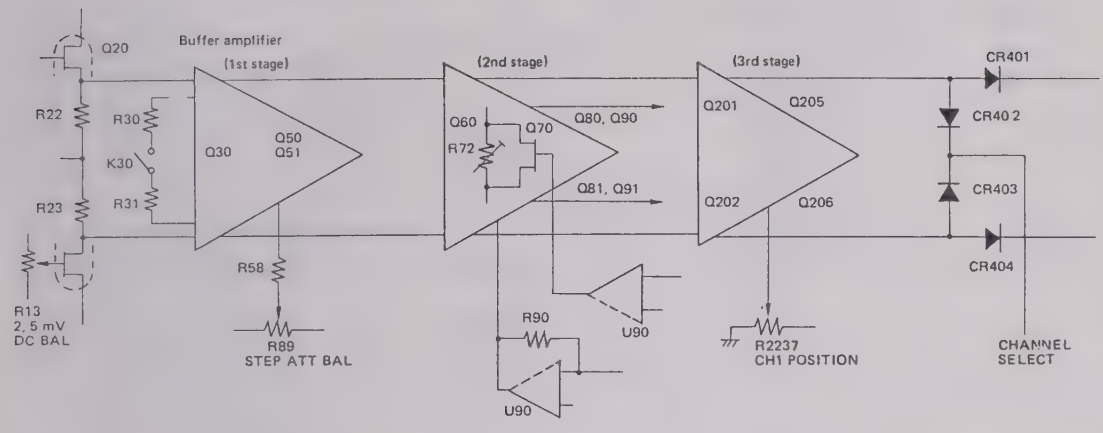

Figure 3-3 CH1 vertical preamplifier block diagram

3.1.3 CH3 and CH4 preamplifiers

Since CH3 and CH4 preamplifiers are identical, CH3 preamplifier only is described. Figure 3-4 shows the schematic block diagram of the CH3 preamplifier.

The signal from the input terminal is first fed to the high-impedance attenuator (x1 and x1/5). The CH3 sensitivity can be switched to 0.1 V/div (x1) or 0/5 V/div (x1/5) in the attenuator. The signal output from the attenuator is then fed to the buffer amplifier which changes the 1-MΩ input impedance. A DC feedback is provided to the buffer amplifier so that the output from Q310 becomes 0 V. The CH3 input impedance is fixed to 1 MΩ by resistors 301 and R302.

The signal from the Q310 emitter is fed to the balance amplifier which consists of emitter grounded transistors Q320 and Q321 and base grounded transistors Q330 and Q331. The CH3 position DC signal is supplied to the Q320 base and the trace position can be varied using resistor R335. The CH3 amplification can be varied using resistor R323 connected between Q320 and Q321 emitters. The parallel circuit of R315 and C315 extracts the CH3 trigger signal.

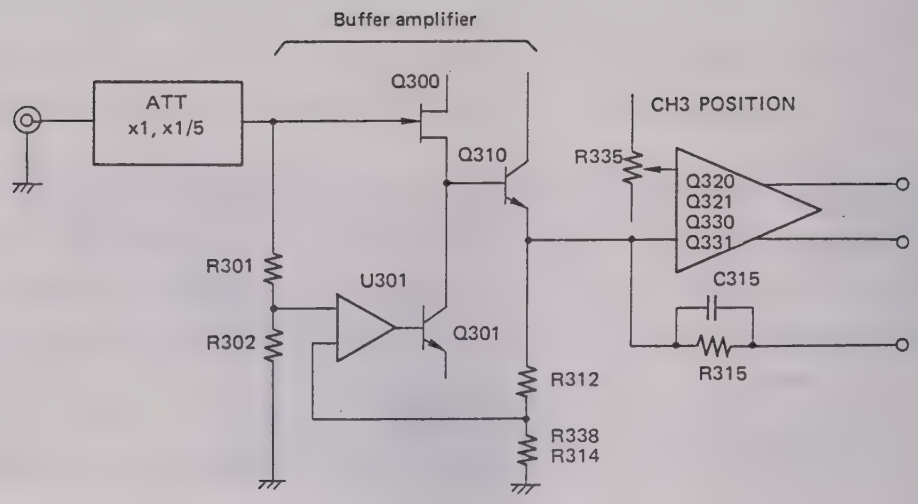

Figure 3-4 CH3 amplifier block diagram

3.1.4 Trigger amplifier

CH1, CH2, CH3 or CH4 trigger signal from the vertical amplifier and the NORM trigger signal can be selected individually. Figure 3-5 shows the block diagram of the trigger amplifier.

The CH1 trigger signal is described as a typical example. The CH1 trigger signal output from the vertical amplifier is fed to the CH1 trigger amplifier which consists of transistors Q500, Q501, Q520 and Q521. It then passes through the diode gate (which consists of CR530, CR531, CR532 and CR533) and is fed to resistors R687 and R688 connected to Q680 and Q681 collectors after amplification. The signal amplitude is approximately 100 mV/div.

Emitter follower transistors Q690 and Q691 distribute signals to be fed to the trigger and peak detection circuits. The command to select the trigger signal is fed from U833 via the respective resistor. The CH1 and CH2 trigger DC LEVELs are adjusted by the CPU via R505 and R545, respectively. Those of CH3 and CH4, however, are adjusted using R611 and R651.

Emitter follower transistors Q690 and Q691 at the final stage of the trigger amplifier output the trigger and peak detection signals.

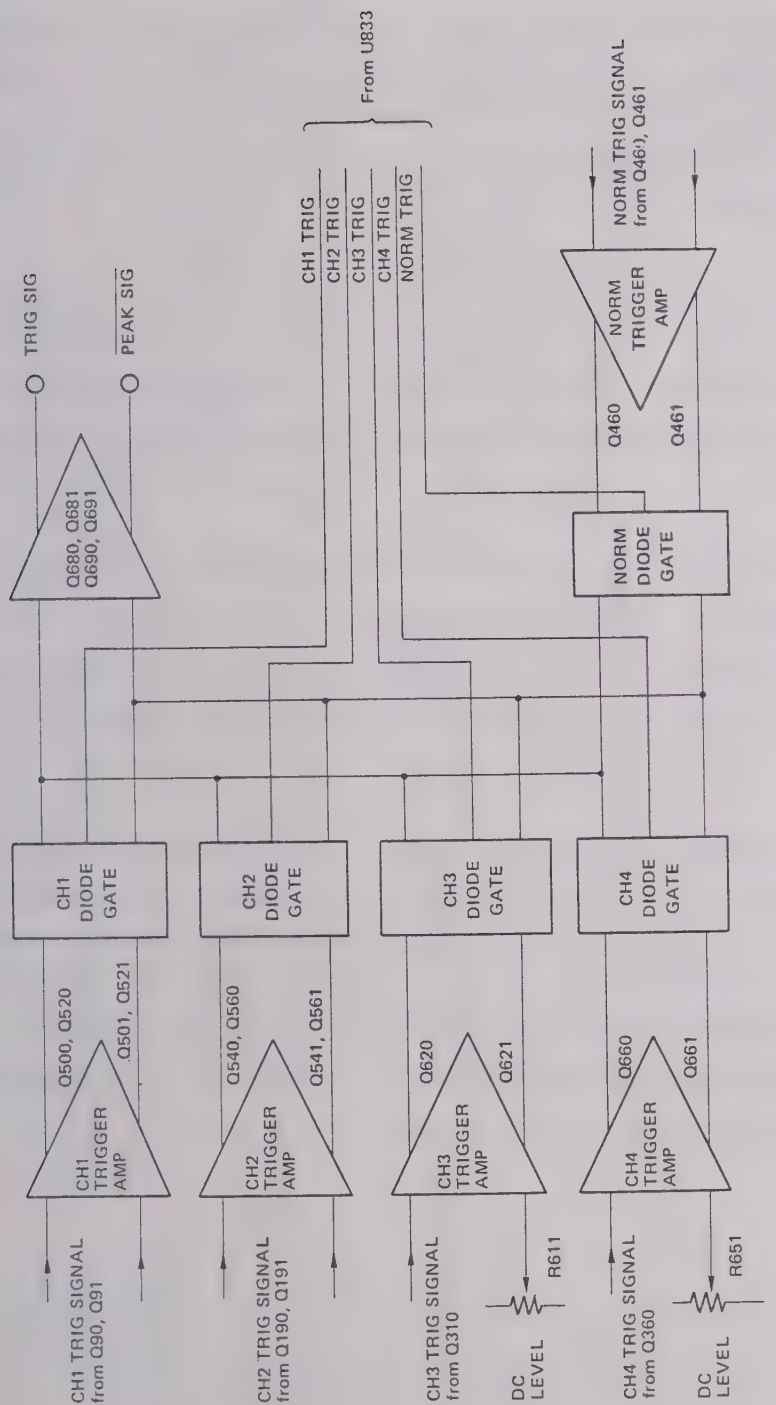

Figure 3-5 Trigger amplifier block diagram

3.2 Peak Detection Circuit

The peak detection circuit receives the peak detection signal (reverse polarity with that of the trigger signal, which means that the polarity is reverse to the signal to be displayed on the screen, and the amplitude is approximately 100 mV/div) from the trigger amplifier. It detects peaks of both the positive and negative signals. The circuit and its operation are shown in Figure 3-6.

The positive signal is amplified by the amplifier which consists of Q2410 and Q2411. Transistor Q2415 charges capacitor C2433. Transistors Q2420 and Q2421 drive the amplifier (Q2410 and Q2411). The charged signal is output from emitter follower transistor Q2432 via buffer FET Q2431. Transistor Q2430 discharges C2433.

The negative signal is amplified by the amplifier which consists of Q2462 and Q2463. Transistor Q2470 charges capacitor C2473. Transistors Q2460 and Q2461 drive the amplifier (Q2462 and Q2463). The charged signal is output from emitter follower transistor Q2472 via buffer FET Q2481. Transistor Q2451 discharges C2473.

The DISCHG pulse shown in Figure 3-6 is fed from the CPU via U1499. Its frequency is between 100 ms and 300 ms. The PG pulse is fed via U1483. The PG pulse, which is used for the partial peak detection that is one of the features of the VP-5516A (peak-to-peak value detection for the intensity modulated portion of the main sweep specified using the B sweep), goes high while the B gate is on and goes low while the gate is off. The pulse is always high when the normal peak detection is conducted.

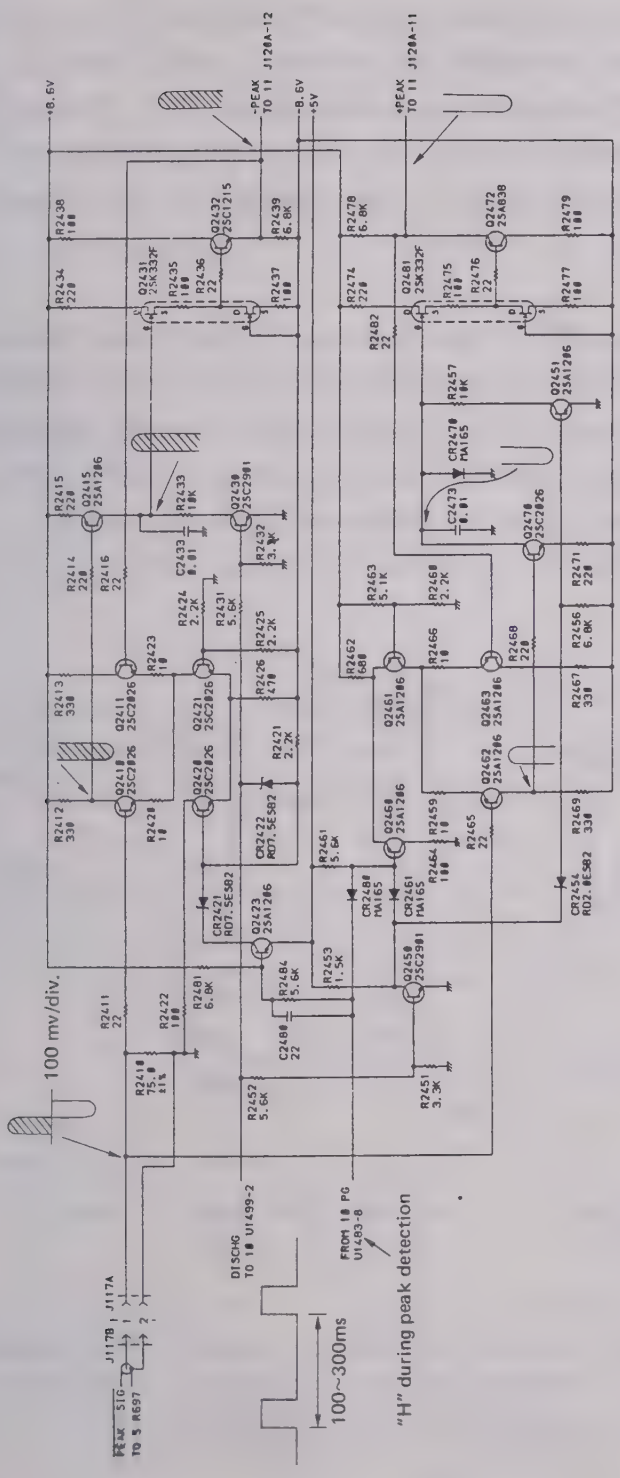

Figure 3-6 Peak detection circuit

3.3 Vertical Mode Circuit

Figure 3-7 shows the schematic block diagram of the vertical mode circuit. The U802 port controls the vertical mode. When CH1 is selected on the front panel, pin 6 of this output port goes low. Upon receipt of this signal via the ring counter, pin 3 of U822 goes low while all other output pins of U822 and U823 stay high. These status are maintained by latch U825 and CH1 is selected as the vertical mode.

When two or more channels are selected, the vertical mode is automatically set to the alternate mode. Pin 8 of U807 outputs a pulse upon receipt of the alternate pulse from the sweep circuit, causing the ring counter which consists of U816 and U817 to be activated. This causes U825 to output a low signal only for the selected channels.

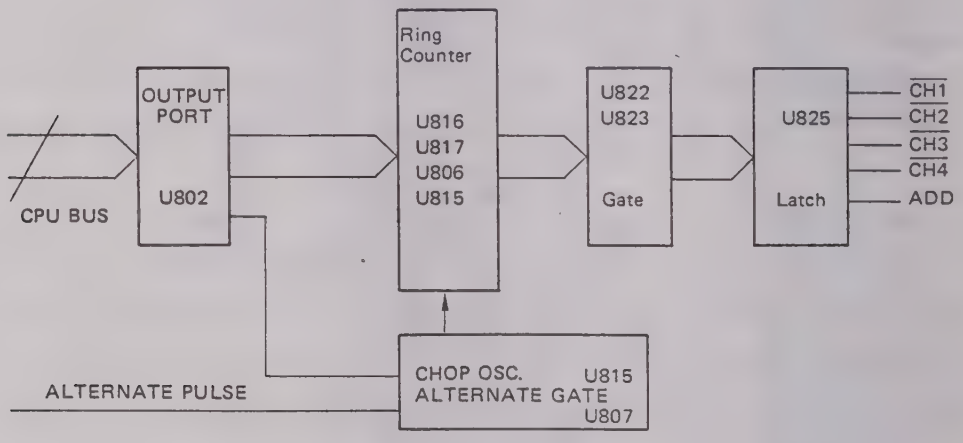

Figure 3-7 Vertical mode block diagram

3.4 Vertical Main Amplifier

The vertical main amplifier is used to amplify the signal output from the delay line to the level sufficient for displaying on the CRT screen. Figure 3-8 shows the block diagram of the vertical main amplifier.

The first stage consists of transistors Q1001 and Q1002. Resistors R1017 and R1018 are for termination of the delay line.

In the second stage, the bandwidth limiter, gain adjustment and separation circuits are installed. The bandwidth limiter consists of capacitors C903 and C904 and diodes CR903 and CR904 and is activated when transistor Q906 turns on. Major components of the separation circuit are Q931 and Q932, which are driven by the separation switching signal. The circuit changes the amount of current that flows Q937 and Q938 emitters, achieving vertical displacement.

The character amplifier output is connected to Q937 and Q938 collectors. When characters are to be displayed, Q936 turns on, causing current to flow CR933. This decreases the potential of Q937 and Q938 emitters and these transistors turn off. This causes transistor Q969 to go off and transistors Q974 and Q975 turn on, connecting the character amplifier output to the third stage. The character display is controlled by the $\overline{\text{VCHASW}}$ signal connected to the Q969 base.

The third stage is a balance output amplifier which consists of emitter grounded transistors Q943, Q944, Q952 and Q953 and base grounded transistors Q954 and Q955. This amplifier controls the Y deflector plates of the CRT.

A function (FINE MAG) to double the gain of the vertical output amplifier is provided to the VP-5516A. When this function is activated, the circuit which consists of transistors Q912 and Q913 is activated.

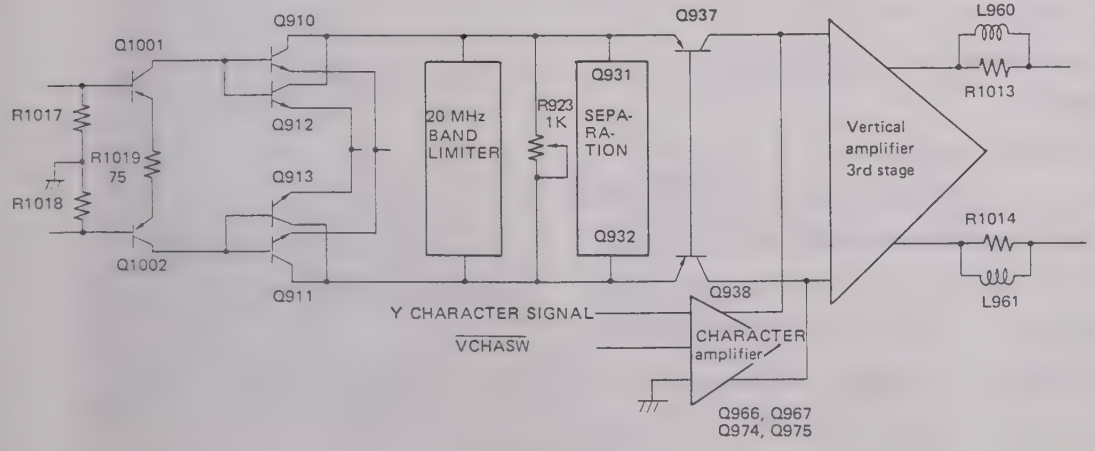

Figure 3-8 Vertical output amplifier block diagram

3.5 Trigger Circuit

The trigger circuit consists of the trigger coupling selector, trigger amplifier and trigger pulse generator. Since A and B sweep trigger circuits are similar, the A sweep trigger circuit only is described.

Trigger coupling selector

The trigger signal amplified to approximately 100 mV/div is fed to the trigger coupling selector via emitter follower transistor Q1104. The major component which selects the trigger coupling, AC, AC-HF, AC-LF, DC or TV, is U1113. For example, when the AC coupling is selected, the control signal from the CPU, AAC goes low, causing transistor Q1110 to turn on. This turns on transistor Q1108 of which emitter potential has been cutoff at approximately -2 V. The DC component of the trigger signal is removed while it passes through Q1108, C1113 and R1116 before it reaches trigger amplifier U1140. The CPU controls the trigger coupling selector by sending the ACA, ACB, ACC, $\overline{\text{AHF}}$ or $\overline{\text{AAC}}$ signal via output ports U1228 and U1229.

U1120 is a hybrid IC named TV SYNC SEPARATOR. When TV signals are supplied, it separates the vertical and horizontal sync signals and feeds them to U1113 and U1213 (B trigger circuit), respectively.

Trigger amplifier

Trigger amplifier U1140 is a wide-band operational amplifier. The trigger signal is fed to one of the differential inputs and the A TRIG LEVEL is fed to the other. These signals are amplified sufficiently so that ECL gate U1171 in the next stage can rectifies the waveform.

In this stage, the FIX trigger circuit is installed. Transistors Q1192 and Q1193 detect maximum values of positive and negative trigger signals, respectively. When the FIX triggering is activated, feedback information is sent to the trigger amplifier so that the mean of these two values is used by ECL gate U1171 as the threshold.

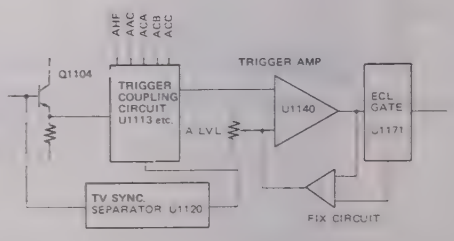

Figure 3-9 Trigger circuit

3.6 A Sweep Circuit

The circuit containing U1303 controls the A sweep sawtooth signal. When the trigger pulse is fed to the CK (clock) pin of U1303, outputs Q and Q invert at the rising edge of the trigger pulse since pin D is high. Upon receipt of this signal, pin 1 of U1333 in gate circuit 1 goes low. This causes transistors Q1340 and Q1341 to turn off and capacitor CA to be charged by current I from the constant power supply. A capacitor from C1515 through C1520 of the A timing circuit is selected according to the current A TIME/DIV setting.

The capacitor is charged from 5 V to 7 V. This voltage is converted to current by resistor R1369 via buffer amplifier Q1350, and the current is fed to the horizontal amplifier. On the other hand, the end of the Q1350 output is detected by the sweep end detection circuit which consists of Q1365 and Q1345. The signal is converted to a logic level and resets U1303 via U1338 and U1330 in gate circuit 2. As a result, signals Q and $\overline{Q}$ invert, transistors Q1340 and Q1341 turn on receiving the signals via gate circuit 1 and the sawtooth signal is generated. U1330 in gate circuit 2 controls hold-off using the signal from the sweep end detection circuit.

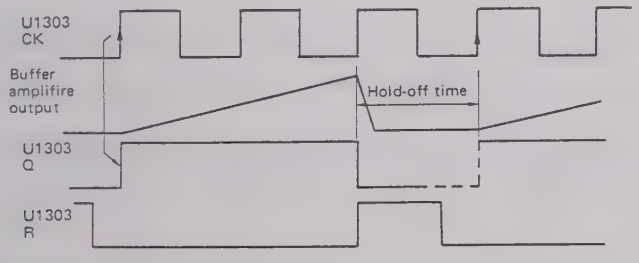

Figure 3-10 (1) A sweep timing chart

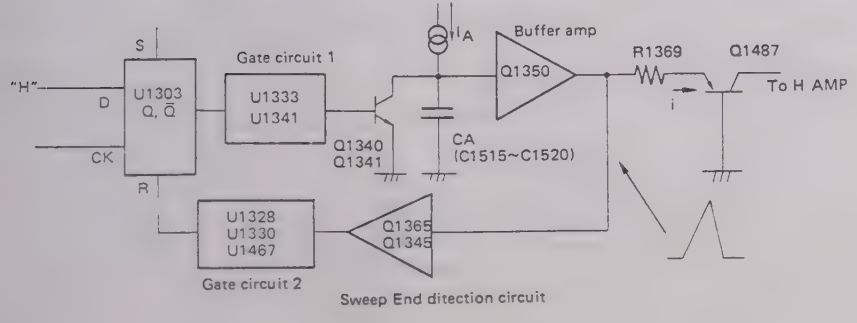

Figure 3-10 (2) A sweep circuit block diagram

3.7 B Sweep Circuit

The circuit containing U1404 controls the B sweep sawtooth signal. Transistor 1450 compares voltages that control the A sweep sawtooth signal and delay time position, then generates the delayed sweep start signal. This signal resets U1404 via U1430 in gate circuit 3. As a result, Q1435 and Q1436 are turned off and capacitor CB is charged by current I from the constant power supply. A capacitor from C1555 through C1560 of the B timing circuit is selected according to the current B TIME/DIV setting.

The capacitor is charged from 5 V to 7 V. This voltage is converted to current by resistor R1466 via buffer amplifier Q1445, and the current is fed to the horizontal amplifier. On the other hand, the end of the Q1445 output is detected by the sweep end detection circuit which consists of Q1465 and Q1448. The signal is converted to a logic level and resets U1404 via U1430 in gate circuit 4. As a result, signals Q and $\overline{Q}$ invert, transistors Q1435 and Q1436 turn on and the sawtooth signal is generated.

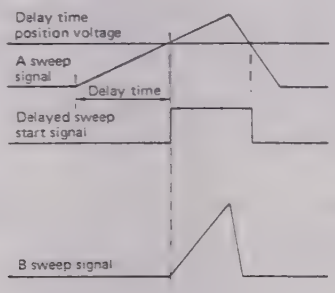

Figure 3-11(1) B sweep timing chart

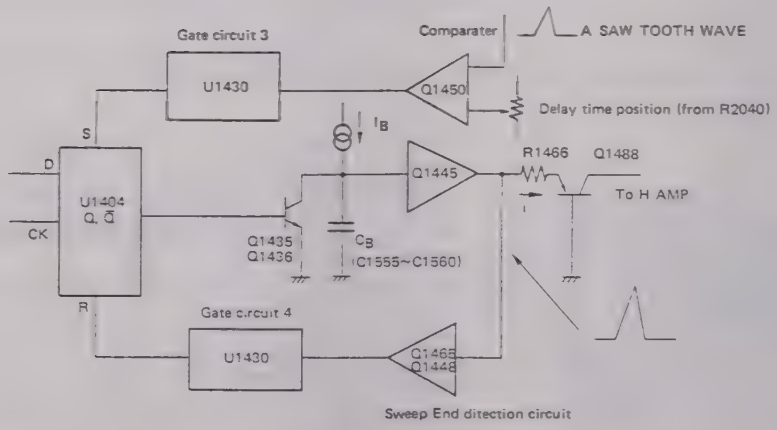

Figure 3-11 (2) B sweep circuit block diagram

3.8 A and B Timing Circuits

The timing circuit determines the A or B sweep time and consists of the constant current power supply and timing capacitor selector. The signal used to select the constant current power supply and the timing capacitor is latched in U1528, U1529 and U1530 for the A sweep and U1530 and U1555 for the B sweep.

As an example, when the A sweep time is set to 1 ms/div, the base of Q1517 goes low, the base of Q1530 goes high and pin 2 of U1527 goes high. The circuit consists of U1517, Q1515 and R1515 is selected as the constant current power supply, C1420 as the timing capacitor and C1522 as the hold-off capacitor.

When the base of Q1517 goes low, input pin 2 of U1517 increases its voltage to reach +8.6 V of input pin 3, causing the voltage of output pin 1 to be lowered. As a result, Q1515 and CR1515 are activated and a current flows R1515, which acts as the constant current power supply. When the base of Q1517 goes high, output pin 1 of U1517 increases its voltage, Q1515 and CR1515 are cut off and do not operate.

U1527 for hold-off capacitor selection is the transistor array of which pins 1 through 8 are the bases and pins 11 through 18 are collectors. When the base voltage becomes high, the corresponding collector keeps the one side of the capacitor connected to the ground potential, thereby that capacitor is selected.

Operation of the B timing circuit is basically the same as that of the A timing circuit. Table 3-3 shows the A sweep time and corresponding output port bit image and Table 3-4 shows those of the B sweep.

Table 3-3 A sweep time and output port bit image

	Constant Power supply selection IA							Timing capacitor selection CA			Hold-off capacitor selection							
U No.	U1529			U1529				U1530			U1528							
Pin No. / A sweep range	15	1	2	3	4	5	6	15	1	2	15	1	2	3	4	5	6	7
0.5 s	H	L	H	H	H	H	L	L	L	H	H	L	L	L	L	L	L	L
0.2 s	L	H	H	H	H	H	L	L	L	H	H	L	L	L	L	L	L	L
0.1 s	H	H	L	H	H	L	H	L	L	H	H	L	L	L	L	L	L	L
50 ms	H	L	H	H	H	L	H	L	L	H	H	L	L	L	L	L	L	L
20 ms	L	H	H	H	H	L	H	L	L	H	H	L	L	L	L	L	L	L
10 ms	H	H	L	H	L	H	H	L	L	H	H	L	L	L	L	L	L	L
5 ms	H	L	H	H	L	H	H	L	L	H	L	H	L	L	L	L	L	L
2 ms	L	H	H	H	L	H	H	L	L	H	L	H	L	L	L	L	L	L
1 ms	H	H	L	L	H	H	H	L	L	H	L	H	L	L	L	L	L	L
0.5 ms	H	L	H	L	H	H	H	L	L	H	L	H	L	L	L	L	L	L
0.2 ms	L	H	H	L	H	H	H	L	L	H	L	H	L	L	L	L	L	L
0.1 ms	H	H	L	H	H	L	H	L	H	L	L	L	H	L	L	L	L	L
50 μs	H	L	H	H	H	L	H	L	H	L	L	L	H	L	L	L	L	L
20 μs	L	H	H	H	H	L	H	L	H	L	L	L	H	L	L	L	L	L
10 μs	H	H	L	H	L	H	H	L	H	L	L	L	L	H	L	L	L	L
5 μs	H	L	H	H	L	H	H	L	H	L	L	L	L	H	L	L	L	L
2 μs	L	H	H	H	L	H	H	L	H	L	L	L	L	H	L	L	L	L
1 μs	H	H	L	L	H	H	H	L	H	L	L	L	L	L	H	L	L	L
0.5 μs	H	L	H	L	H	H	H	L	H	L	L	L	L	L	H	L	L	L
0.2 μs	L	H	H	L	H	H	H	L	H	L	L	L	L	L	H	L	L	L
0.1 μs	H	H	L	L	H	H	H	H	L	L	L	L	L	L	L	H	L	L
50 ns	H	L	H	L	H	H	H	H	L	L	L	L	L	L	L	L	H	L
20 ns	L	H	H	L	H	H	H	H	L	L	L	L	L	L	L	L	L	H

"H"···High level

"L"···Low level

Table 3-4 B sweep time and output port bit image

	Constant power supply selection I_B						Timing capacitor selection C_B			
U No.	U1530					U1555	U1555			
Pin No. / B sweep range	3	4	5	6	7	15	1	2	3	4
0.5 s										
0.2 s										
0.1 s										
50 ms	L	H	L	H	H	L	−	L	L	H
20 ms	H	L	L	H	H	L	−	L	L	H
10 ms	L	L	H	H	L	H	−	L	L	H
5 ms	L	H	L	H	L	H	−	L	L	H
2 ms	H	L	L	H	L	H	−	L	L	H
1 ms	L	L	H	L	H	H	−	L	L	H
0.5 ms	L	H	L	L	H	H	−	L	L	H
0.2 ms	H	L	L	L	H	H	−	L	L	H
0.1 ms	L	L	H	H	H	L	−	L	H	L
50 μs	L	H	L	H	H	L	−	L	H	L
20 μs	H	L	L	H	H	L	−	L	H	L
10 μs	L	L	H	H	L	H	−	L	H	L
5 μs	L	H	L	H	L	H	−	L	H	L
2 μs	H	L	L	H	L	H	−	L	H	L
1 μs	L	L	H	L	H	H	−	L	H	L
0.5 μs	L	H	L	L	H	H	−	L	H	L
0.2 μs	H	L	L	L	H	H	−	L	H	L
0.1 μs	L	L	H	L	H	H	−	H	L	L
50 ns	L	H	L	L	H	H	−	H	L	L
20 ns	H	L	L	L	H	H	−	H	L	L

"H"···High level

"L"···Low level

"−"···Don't care

3.9 Horizontal Amplifier

Figure 3-12 shows the block diagram of the horizontal amplifier. The horizontal amplifier is used to amplify the sawtooth signal from the sweep circuit and drive the CRT horizontal deflector plates. The H POSITION (FINE COARSE) is provided in the input stage of the amplifier and the trace can be adjusted horizontally. The x1 and x10 magnification gain switching circuit is installed in the next stage. When magnification is x1, Q1662 and Q1663 are activated while Q1660 and Q1661 are activated in the x10 MAG mode (magnified sweep). Switching is controlled by U1672 by turning Q1670 and Q1671 on or off using the $\overline{\text{MAG}}$ signal.

As for character signals, the output from U2131 is amplified by Q1680 through Q1683, passes through diode gate which is consists of CR1716 and CR1718, and is further amplified by the horizontal main amplifier. The output from the horizontal main amplifier is used for display on the screen.

The character/sawtooth switching signal is called CHA which turns the diode gate (CR1680, CR1681, CR1719 and CR1720) on or off. When CR1680 and CR1681 are off, diodes CR1719 and CR1720 are on, causing character signals to be fed to the horizontal main amplifier. When CR1689 and CR1681 are on, diodes CR1719 and CR1720 are off, causing the sawtooth signal to be fed to the horizontal main amplifier.

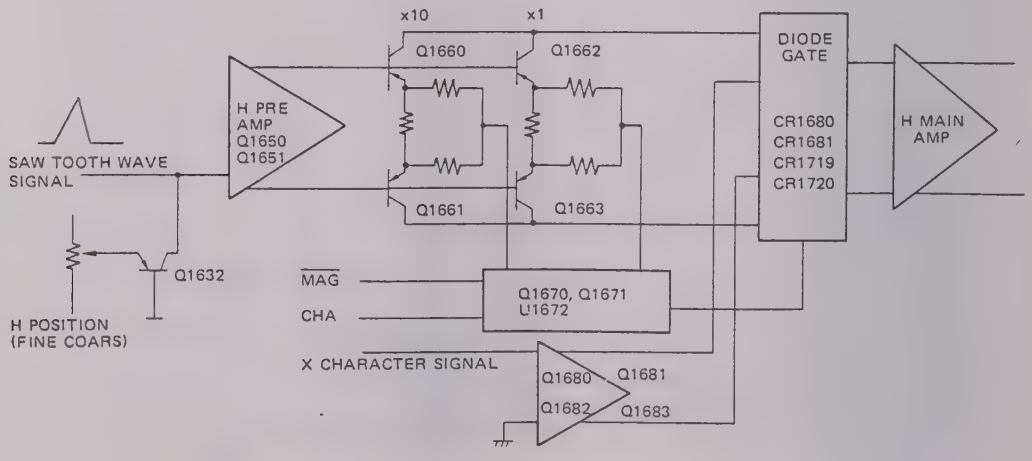

Figure 3-12 Horizontal amplifier block diagram

3.10 High-voltage Generator and Z-axis Circuit

High-voltage generator

Transistor Q1001 drives the primary coil of high-voltage transformer T1802 and generates high voltage at the secondary coil. The oscillation frequency is approximately 30 kHz.

When the power supply is turned on, a current flows from the output pin of U1801 to the base of Q1001 via R1809. As a result, the collector current begins to flow and positive feedback is applied to the coil connected to the base of Q1001 and the base current continues to increase.

Approximately -1.5 kV high voltage is generated at the secondary coil of T1802 and sent to the high-voltage rectification block U1805 and the filter circuit which produces the CRT cathode voltage. The high-voltage rectification block increases the voltage by 10 times and supply approximately 15 kV to the CRT anode. The filter circuit supplies approximately -1.5 kV DC voltage to the CRT cathode and R1823. The voltage divided by R1823 is sent to U1801 as feedback for continuous supply of regulated -1.5 kV.

Z-axis circuit

The Z-axis amplifier is a shunt feedback type amplifier and consists of transistors Q1840, Q1847, Q1862 and Q1859. The Q1852 collector voltage changes between 0 V and approximately 60 V as the Q1840 emitter current increases or decreases.

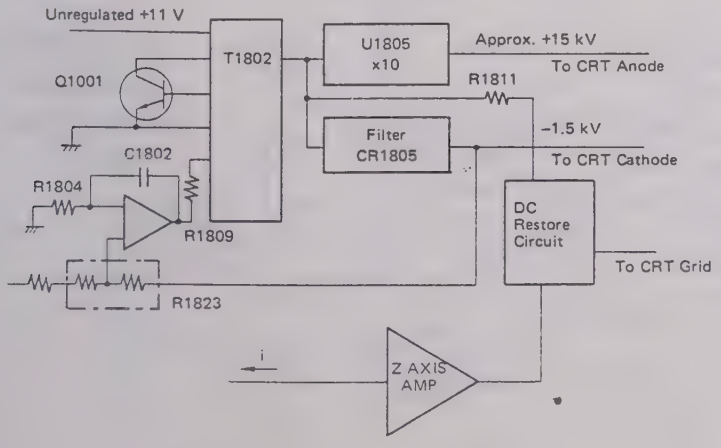

Figure 3-13 High-voltage generator and Z-axis circuit block diagram

3.11 Power Supply

The VP-5516A operates with power sources from 90 VAC through 250 VAC. The AC power supplied from the inlet connector is first fed to the line filter mainly consists of L1901 and L1902. It is rectified and smoothed by the circuit made up of CR1901, C1906 and C1907.

Hybrid IC U1901 contains the oscillation and control circuits and the switching power transistor. It drives the primary coil of transformer T1901. The power supply contains the switching regulator and has the flyback type circuit. When the switching power transistor is on, therefore, energy is stored and the stored energy is transferred to the secondary coil while the transistor is off.

For regulation of the secondary output voltage, +5 V produced by rectifying and smoothing the voltage output from pin A of T1901 is monitored as feedback via photocoupler RT1918. Resistor R1907 limits lash current in the power supply circuit when the power is turned on and is shorted by the triac CR1908 when the power supply begins normal operation. Photocoupler RT1917 extracts the line sync signal which is converted to the sawtooth signal by operational amplifier U1923 and sent to the trigger circuit.

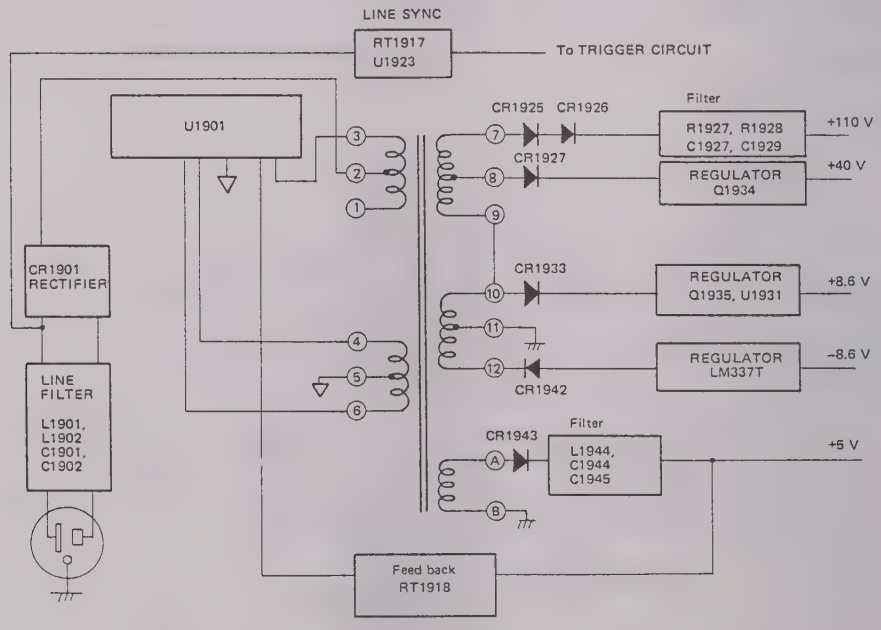

Figure 3-14 Power supply block diagram

3.12 CPU (Central Processing Unit)

The CPU and peripheral circuit consists of CPU U2032, ROM U2056, RAM U2057 and I/O port. CPU U2032 contains the A/D converter and is capable of converting up to 8-channel analog inputs to digital data. This feature is used for A/D conversion of positive and negative peak values which are output signals of CH1/CH2 position, A/B trigger level or peak detection circuits. The frequency of the ceramic oscillator connected to the CPU is approximately 12 MHz.

CPU pins PD0 through PD7 are the data and lower address busses. Pins PF0 through PF7 are the upper address buss. Pins PA0 through PA07 and PB0 through PB7 are bidirectional input/output ports. Pins AN0 through AN7 are the exclusive I/O port for the built-in A/D converter. PA0 through PA7 receive information of the front panel and sweep circuit status. It sends data to U2019 which controls STEP ATT BALANCE of the vertical preamplifier and DC BALANCE of the trigger amplifier, and U2060, U2061 and U2062 which control various circuits. Selection of I/O port to be activated is conducted by CPU pins PB0 through PB7 and PC0 through PC7.

Input from panel key switches is fed via U2005 and U2006 and is latched by sending a low level signal to D0 through D7 of U2005. When a key switch on the front panel is pressed, one of D0 through D7 connected to that key goes low which is sent to D0 through D7 of U2006. Upon receipt of this signal, U2006 is enabled and key switch status data is input.

The serial input, parallel output (8 bits) port is used for controlling various circuits. Data are sent to respective circuits via two control lines (DATA and CLK).

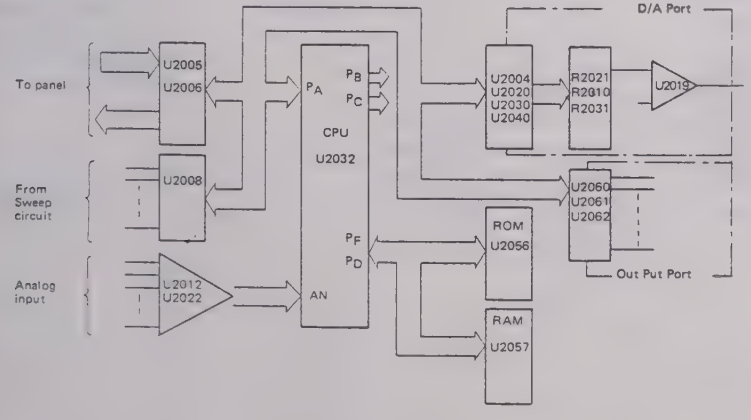

Figure 3-15 CPU and peripheral circuit block diagram

3.13 Character Circuit

Composition

U2101 oscillates with 3.2 MHz frequency and counters U2102 and U2103 count the oscillation signal. The outcome of the counters is sent to U2120 and U2121 as address via address selectors U2104 and U2105. U2104 and U2105 send signals to alternately activate address data from the CPU and latched in U2106 and U2108. RAM U2120 or U2120 specified by the address latches and stores necessary data from the CPU in U2122 or U2123. The stored data is sent and again latched by U2146 or U2125. Data latched in U2146 or U2125 is converted to the analog signal by R2139 and U2131 or R2138 and U2131, respectively. The analog signal is sent to the respective character amplifier as the character signal. The output from R2138/U2131 is sent to the X-axis character amplifier and the output from R2139/U2131 is sent to the Y-axis character amplifier.

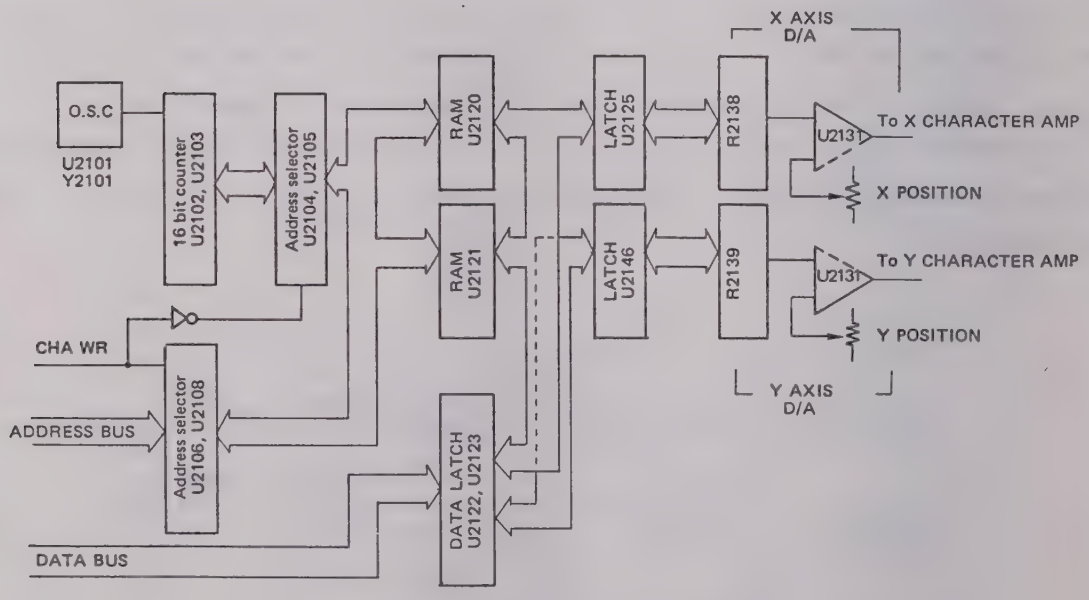

Figure 3-16 Character circuit block diagram

Operation

Data for display from the CPU are always stored in U2120 or U2121 which continuously up-dates data. Each of U2120 and U2121 have the 8k-word capacity and sends data sequentially starting from address 0 according to instruction from address counter U2102 or U2103. When 8k-word data have been sent out, the address returns to 0. This operation is repeated with 20 ms intervals and character signals are sent for display on the screen.

The X-Y vector scan system is adopted for the display where dot positions are specified by X- and Y-axis voltages. The dot display for character display is conducted alternately with the waveform display using the time sharing system. The allocated time for 1 dot is 20 ms/8k or 2.5 µs. Actually, the allocated time for 1 dot is 1/3 of 2.5 µs which is 0.83 µs and that for the waveform display is 2/3 of 2.5 µs which is 1.67 µs. When space data are output from U2120 or U2121, however, the entire time of 2.5 µs is used for the waveform display.

Dot/waveform display switching is controlled by the horizontal amplifier, vertical main amplifier and Z-axis circuit. The Z-axis circuit switches the intensity signals for waveform or dot display.

Semiconductors used in the VP-5516A

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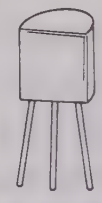	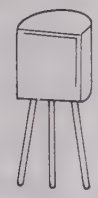	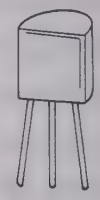
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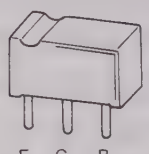	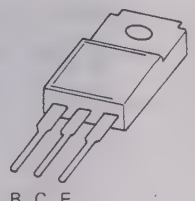	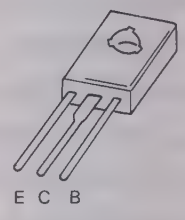
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		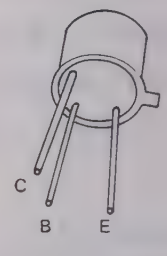
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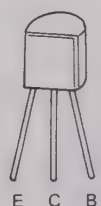	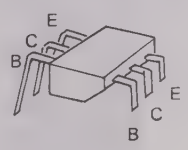	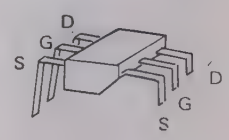
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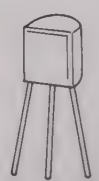
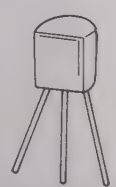
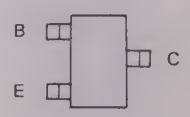
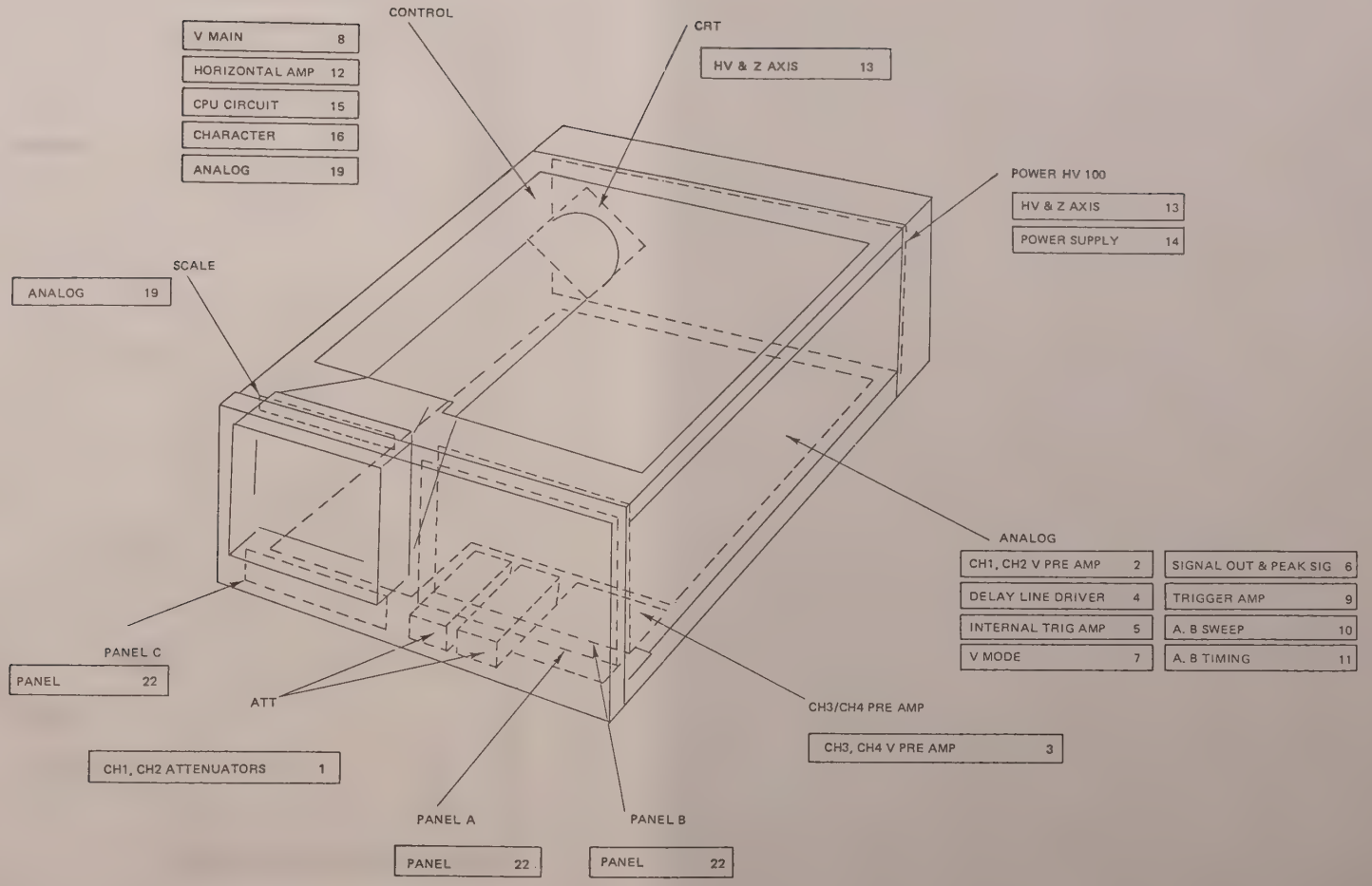
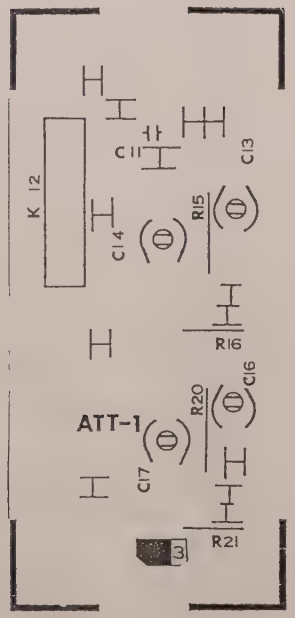
		



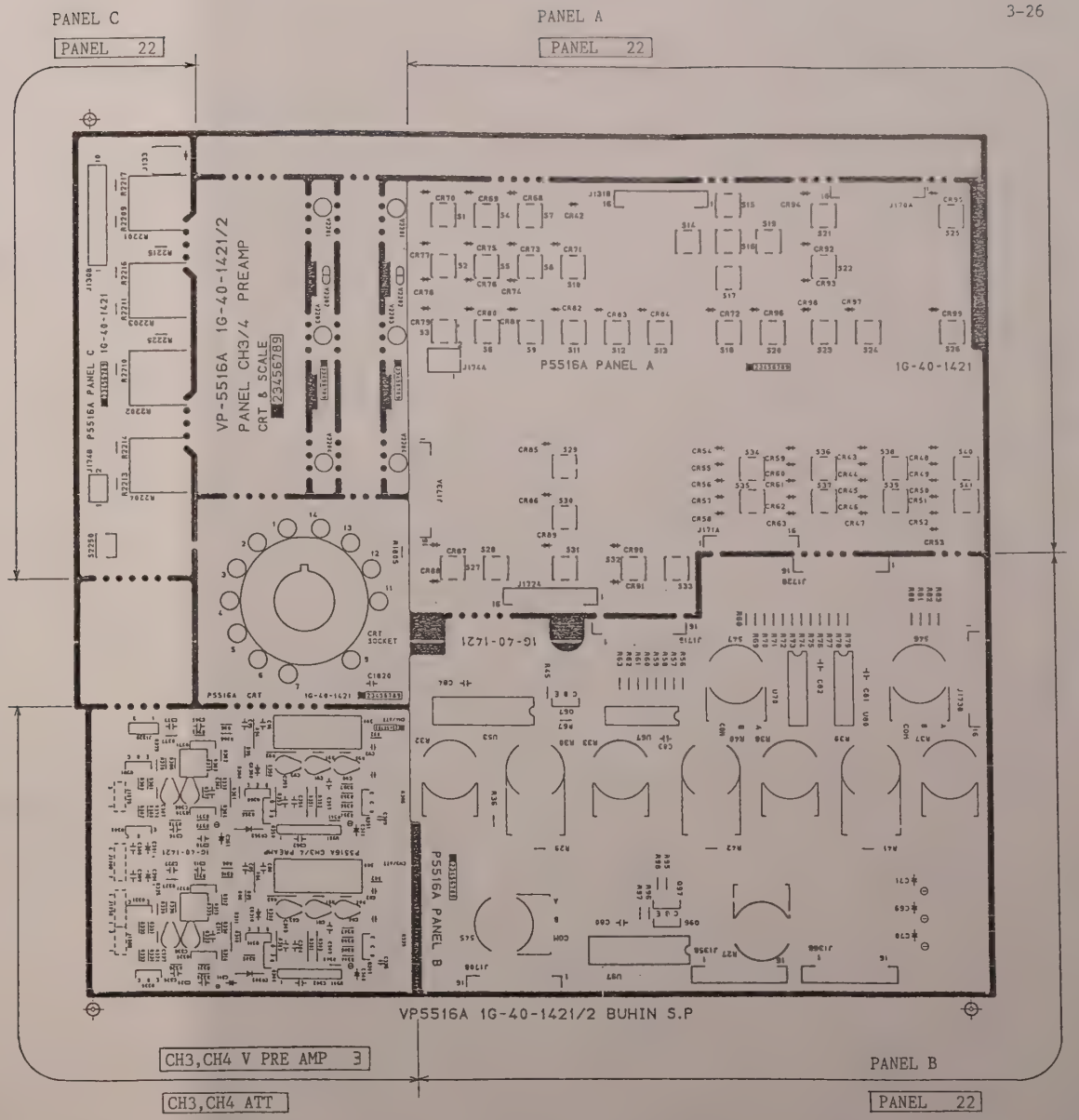
5516A
Printed circuit board configuration



CH1,CH2 ATTENUATORS 1

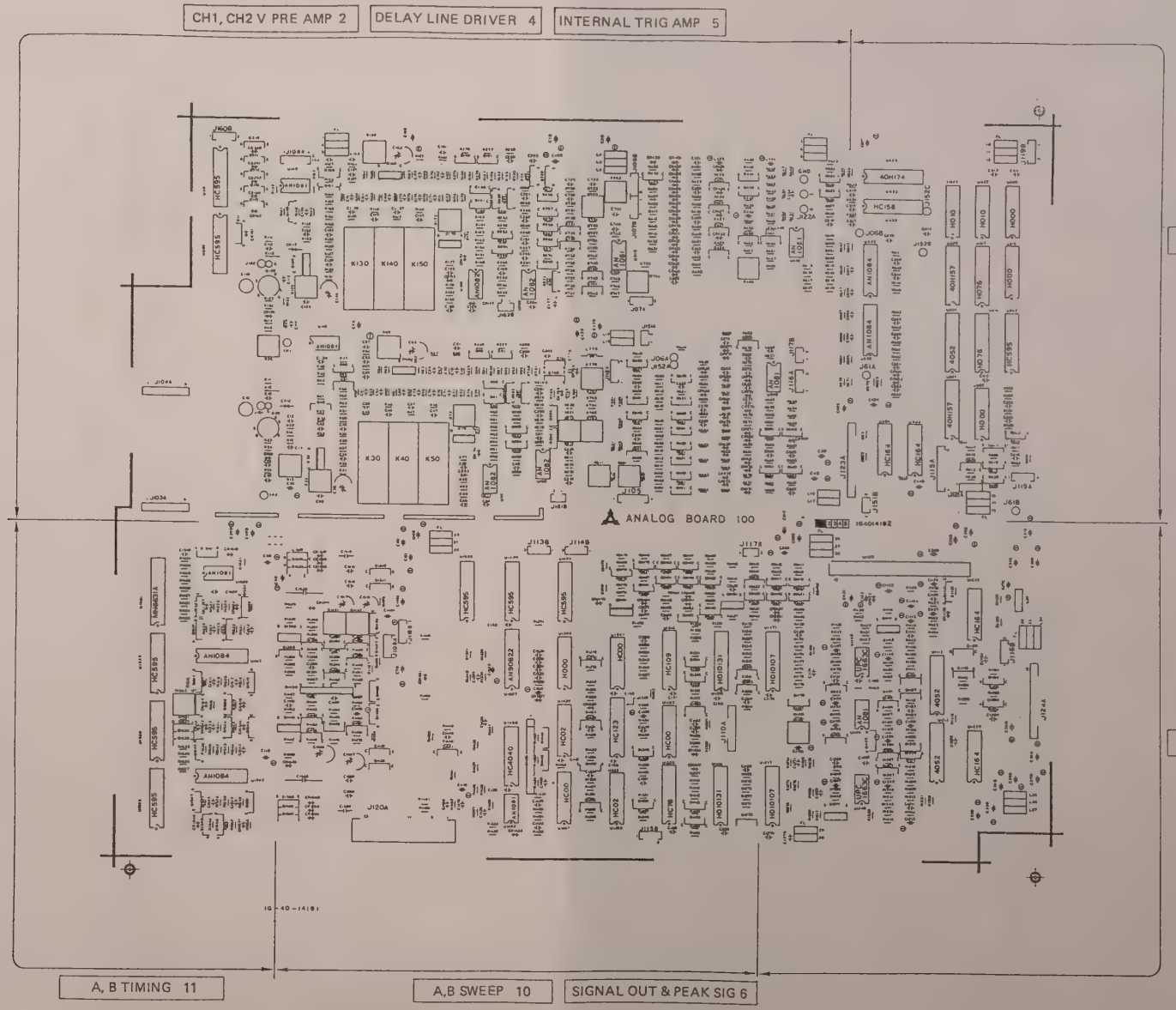
5516A ATT

ATT board parts configuration



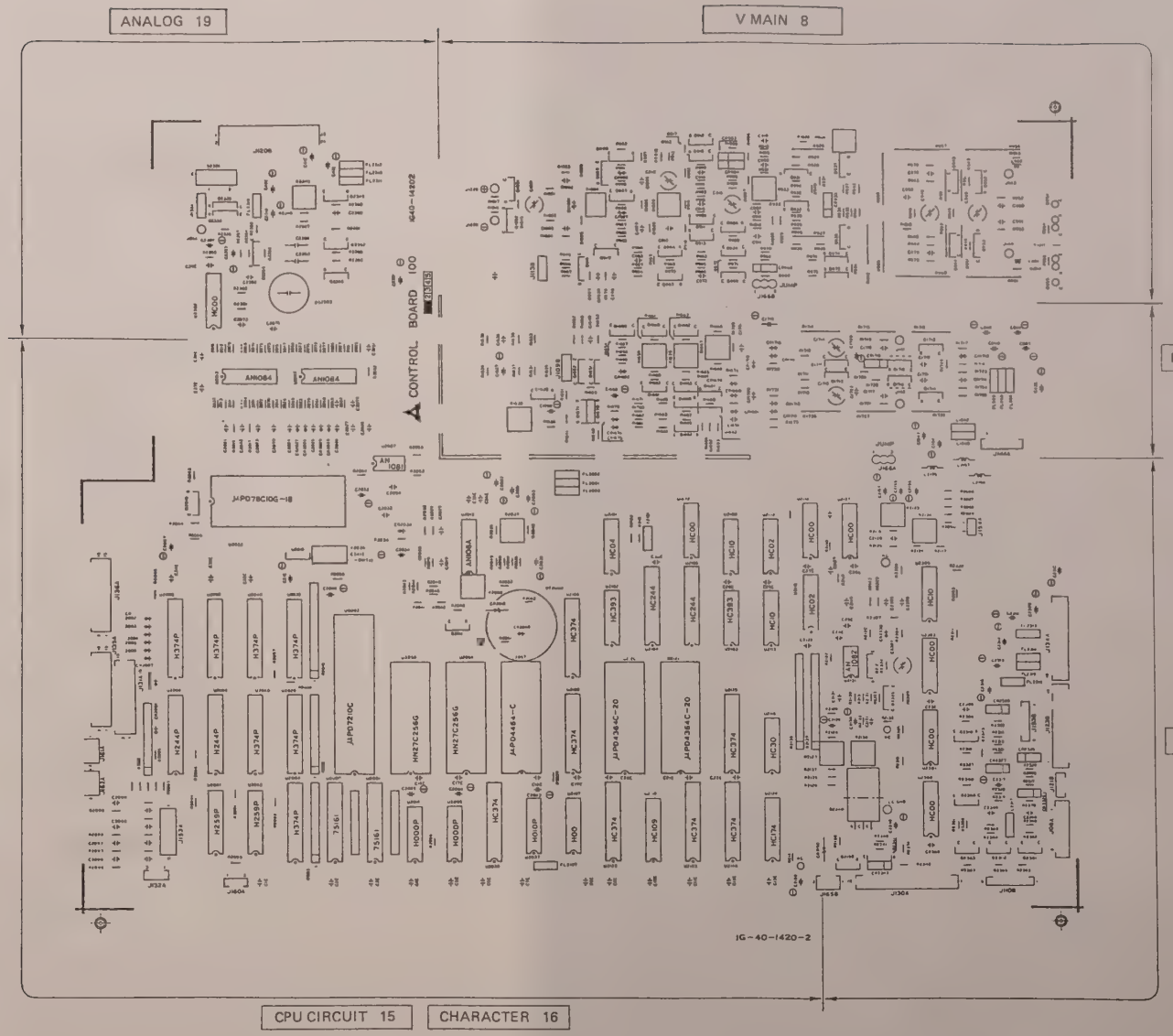
5516A PANEL,CH3/CH4 ATT

PANEL and CH3/CH4 ATT board parts configuration


CH1, CH2 V PRE AMP 2
DELAY LINE DRIVER 4
INTERNAL TRIG AMP 5
V MODE 7
TRIGGER AMP 9
A, B TIMING 11
A,B SWEEP 10
SIGNAL OUT & PEAK SIG 6
ANALOG BOARD 100

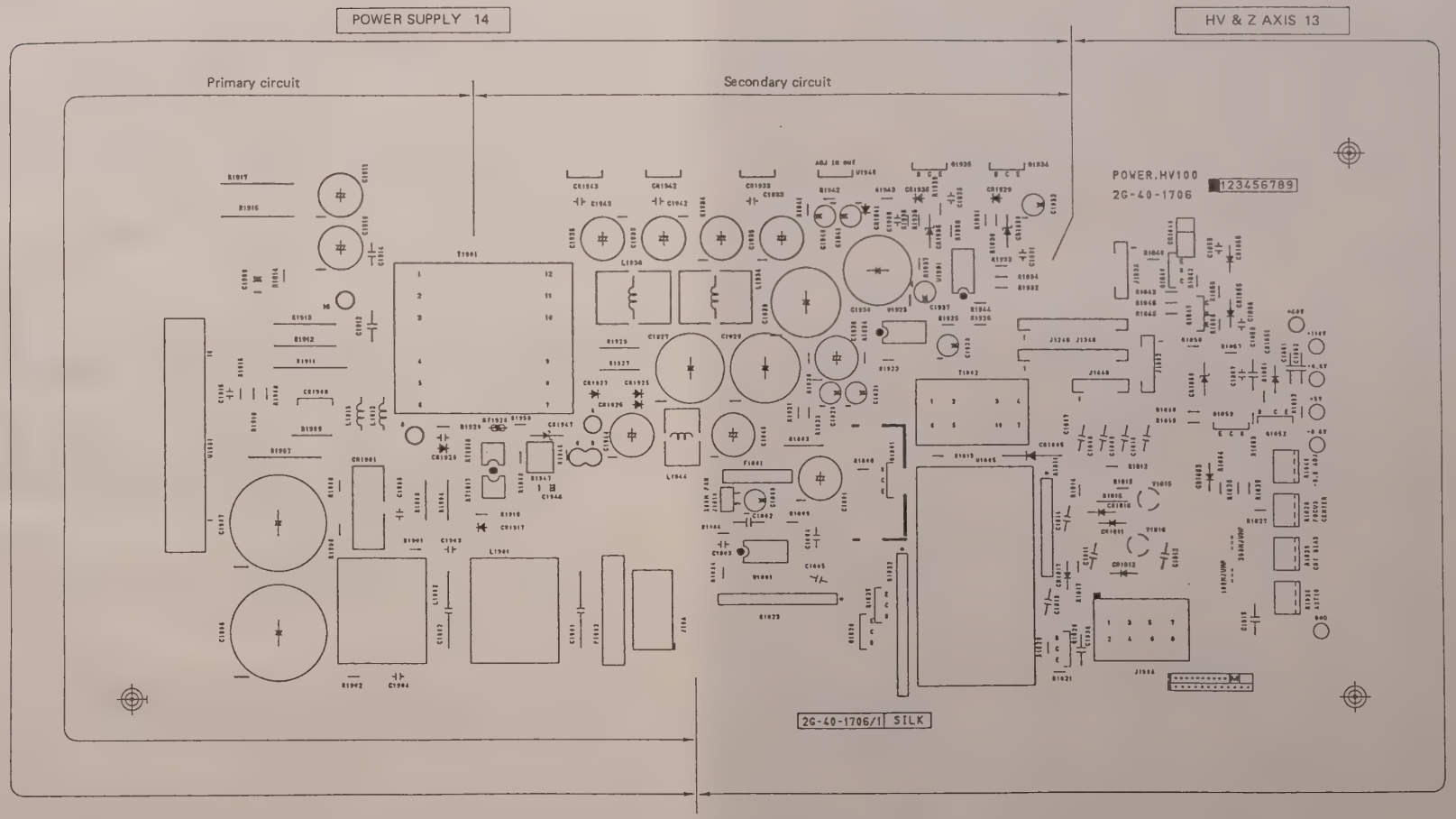
5516A ANALOG

ANALOG board parts configuration



5516A CONTROL

CONTROL board parts configuration



5516A POWER. HV

POWER and HV board parts configuration

4. ADJUSTMENT

4.1 Preparation

- o Conduct the warm-up for at least 15 minutes before starting adjustments.
- o The power source shall be as follows:
  AC 90 V to 250 V ±5%, 48 Hz to 440 Hz
- o The ambient conditions shall be as follows:
  15°C to 35°C, 60% relative humidity
  The standard conditions should be used whenever possible.

4.2 Adjustment Procedure

4.2.1 Power supply

o +5.1V adjustment

Adjust control R1947 on POWER board (14) so that the voltage measured at pin J124B-9 is +5.1V ±1% at AC 100V or +5.2V at AC 220V.

o -8.6V adjustment

Adjust control R1940 on POWER board (14) so that the voltage measured at pin J124B-8 is -8.6 ±1%.

o FOCUS CENTER

Set the FOCUS control at the center. Adjust control R1828 on POWER board (13) so that the trace is the sharpest.

o ASTIG

Supply a 50-kHz sinewave and set the VP-5516A for an 8-div vertical deflection and an 1-div frequency cycle. Adjust control R1830 on POWER board (13) so that the trace is the sharpest.

o CRT BIAS

Set the A INTEN control at a ◯ position. Adjust control R1829 on POWER board (13) so that the trace just appears.

o Rotation coil

Press the SEL key to select the ROTATION mode. Check the trace moving range by pressing the ∧ and ∨ keys. Adjust S2301 on CONTROL board (17) so that the trace is parallel to the horizontal graticule. Press the SELECT key.

The parallelism of the trace must be within 0.3 division or less.

o Z AXIS

Set the A INTEN control to a ◯ position. Adjust trimmer C2307 on CONTROL board (18) so that the leading edge of the trace is not excessively bright. → •————

4.2.2 Rough readout display adjustment

o CH-A X level, X gain, Y level and Y gain

Press the SEL key to display the menu, then <, > and CH1 GND keys at the same time.

When the pattern dots appears on the display,then adjust controls R2127, R2123, R2136 and R2134 on CONTROL board (16) both in the X- and Y-axis directions so that dots are on the graticule intersections.

CH-A X gain: R2123
CH-A X level: R2127
CH-A Y gain: R2134
CH-A Y level: R2136

When the above adjustments are complete, press the ∨ key.

4.2.3 Rough attenuator balance adjustment

o CH1 DC BAL

Adjust control R13 on ANALOG board (2) so that CH1 traces in the 2 mV/div and 5 mV/div ranges overlap. The fine adjustment is conducted automatically by the microprocessor.

o CH1 STEP ATT BAL

Adjust control R89 so that the difference between CH1 traces in the 20 mV/div and 5 mV/div is minimum.

o CH2 DC BAL

Adjust control R26 on ANALOG board (2) so that CH1 traces in the 2 mV/div and 5 mV/div ranges overlap.

o CH2 STEP ATT BAL

Adjust control R189 on ANALOG board (2) so that CH1 traces in the 20 mV/div and 5 mV/div ranges overlap.

Attenuator, variable and trigger balance adjustment

Press the SEL key, select DC BALANCE, then press the SEL key again. The microprocessor automatically adjusts the attenuator, variable and trigger balance.

4.2.4 Vertical axis

o CH1 GAIN

Set the channel 1 to the 5 mV/div range and supply a 20-mV calibration signal. Set control R72 on ANALOG board (2) at the center and the CH1 VARIABLE control at the CAL position. Adjust control R923 on CONTROL board (8) so that the calibration signal amplitude is 4 div ±1%.

Variable check: 1:2.5

o CH2 GAIN

Set the channel 2 to the 5 mV/div range and supply a 20-mV calibration signal. Set the CH2 VARIABLE control at the CAL position. Adjust control R172 on ANALOG board (2) so that the calibration signal amplitude is 4 div ±1%.

Variable check: 1:2.5

o CH3 GAIN

Set the channel 3 to the 0.1 V/div range and supply a 0.5-V calibration signal. Adjust control R323 on CH3/4 board (3) so that the calibration signal amplitude is 5 div ±1%.

o CH4 GAIN

Set the channel 4 to the 0.1 V/div range and supply a 0.5-V calibration signal. Adjust control R373 on CH3/4 board (3) so that the calibration signal amplitude is 5 div ±1%.

o CENTER

Set the CH2 input to the ground and the vertical mode to CH2. Adjust control R904 on CONTROL board (8) so that the trace does not shift at the center of the screen when the POLARITY key is pressed.

o FMAG

Locate the CH2 trace at the center of the screen. Adjust control R1004 on CONTROL board (8) so that the trace does not shift when the FINE MAG key is pressed.

o CH1 POS CENTER

Set the channel 1 to the 5 mV/div range and the input to the ground. Adjust control R213 on ANALOG board (2) so that the trace is at the center of the screen when the vertical position control is at the central position.

o CH2 POS CENTER

Set the channel 2 to the 5 mV/div range and the input to the ground. The adjustment procedure is the same as channel 1, except control R263 is adjusted.

4.2.5 Reference range input capacitance

The following adjustments are conducted using a standard probe.

o CH1: Adjust trimmer C10 on ANALOG board (2) so that the input capacitance in the 5 mV/div range is 24 pF (22 pF ±3 pF).

o CH2: Adjust trimmer C110 on ANALOG board (2) so that the input capacitance in the 5 mV/div range is 24 pF (22 pF ±3 pF).

o CH3: Adjust trimmer C80 on CH3/CH4 board (3) so that the input capacitance in the 0.5 V/div range is 24 pF (22 pF ±3 pF).

o CH4: Adjust trimmer C90 on CH3/CH4 board (3) so that the input capacitance in the 0.5 V/div range is 24 pF (22 pF ±3 pF).

o CH3/CH4 0.5 V/div

- o CH3: Adjust trimmer C81 so that the input capacitance in the 0.5 V/div is 24 pF (22 pF ±3 pF).
- o CH4: Adjust trimmer C91 so that the input capacitance in the 0.5 V/div is 24 pF (22 pF ±3 pF).

4.2.6 Reference range square-wave

o CH1

Set the vertical mode to CH1 and 5 mV/div. Terminate a square-wave signal having less than 1-ns rising time with 50Ω termination (RG-58A/U cable and TEK PG-506) and supply the signal to the CH1 input terminal.

V MAIN AMP adjustment:

Set trimmer C1001 on CONTROL board (8) to the maximum.
Set trimmer C912 on CONTROL board (8) to the meddle position.
Set trimmer C916 on CONTROL board (8) to the minimum.
Set trimmer C946 on CONTROL board (8) to the minimum.
Set trimmer C949 on CONTROL board (8) to the minimum.
Take balance of control R1028 on CONTROL board (8) with C912.

CH1 adjustment:

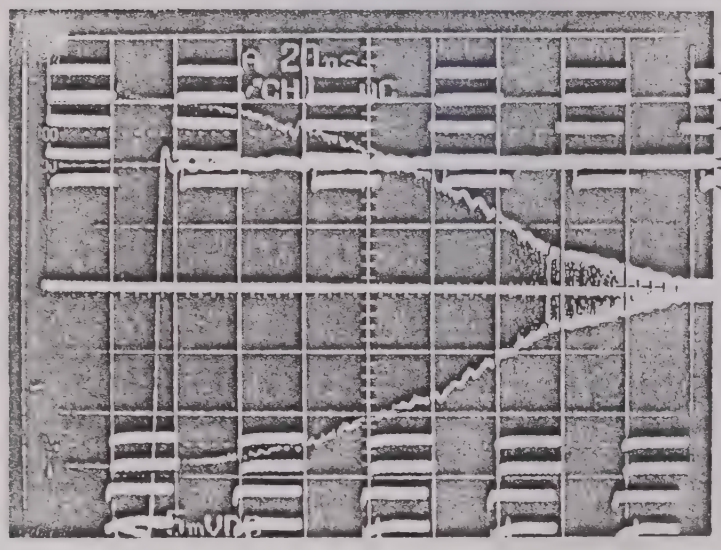
Set trimmer C63 on ANALOG board (2) to the maximum.

Supply a 400-kHz square-wave. Adjust trimmer C35 and control R35 on ANALOG board (2) so that traces are as shown in the reference photo below in the sweep range between 20 ns/div and 0.1 µs/div.

The overshoot must be less than 3% (0.2 div/6 div).

Conduct fine adjustment using C912, R1028, C949, C946 and C63.

Reference Photo 1



o CH2

Set the vertical mode to CH2 and 5 mV/div. Terminate a square-wave signal having less than 1-ns rising time with 50Ω termination (RG-58A/U cable and TEK PG-506) and supply the signal to the CH2 input terminal.

Set trimmer C163 on ANALOG board (2) to the maximum.

Supply a 400-kHz square-wave. Adjust trimmer C35 and control R35 on ANALOG board (2) so that traces are as shown in the reference photo 1 in the sweep range between 20 ns/div and 0.1 µs/div.

The overshoot must be less than 3% (0.2 div/6 div).

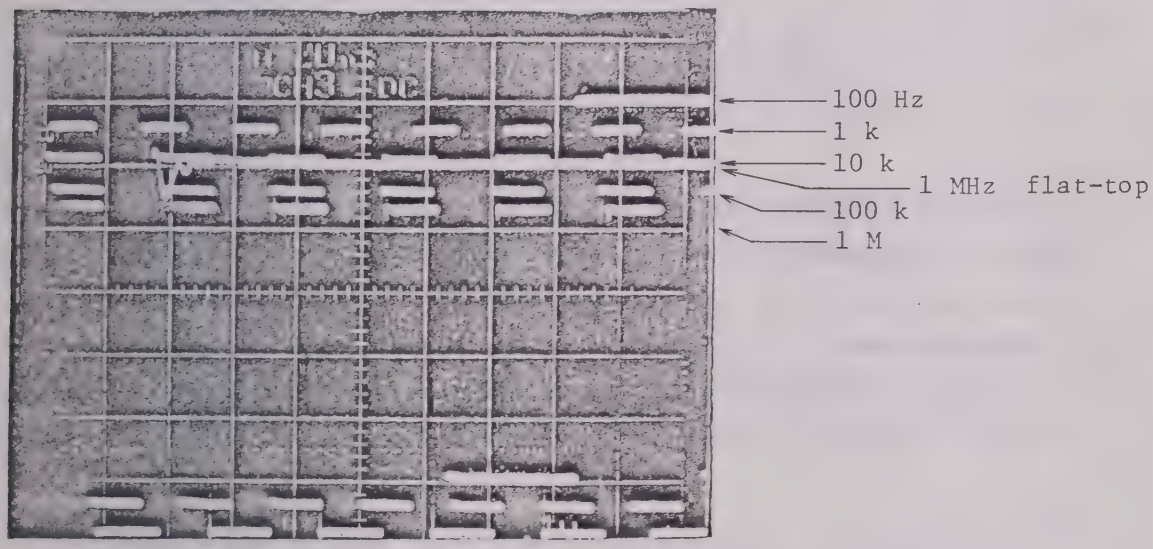
Conduct fine adjustment by repeating the above adjustments.

o CH3 square-wave in 0.1 V/div range

Set the vertical mode to CH3 and 0.1 V/div. Terminate a square-wave signal having less than 1-ns rising time with 50Ω termination (RG-58A/U cable and TEK PG-506) and supply the signal to the CH3 input terminal.

Set the sweep range to 20 ns/div and supply a 400-kHz square-wave. Adjust the overshoot and flatness using trimmers C336 and C337 on CH3/CH4 board (3), respectively. The overshoot must be less than 4% (0.2 div/5 div).

Reference Photo



o CH4 square-wave in 0.1 V/div range

Set the vertical mode to CH4 and the sweep range to 20 ns/div, and supply a 400-kHz square-wave. Adjust the overshoot and flatness using trimmers C386 and C387 on CH3/CH4 board (3), respectively. The overshoot must be less than 4% (0.2 div/5 div).

4.2.7 Attenuator adjustments

Connect the standard probe to the CH1 input. Supply an 1-kHz square-wave signal to channel 1 and adjust the vertical deflection to 6 divisions.

o CH1 x10 attenuator

Adjust trimmers C22 and C21 on ATT-1 board (1) so that the square-waveform displayed is flat in the 50 mV/div range.

o CH1 x100 attenuator

Adjust trimmers C17 and C16 on ATT-1 board (1) so that the square-waveform displayed is flat in the 0.5 V/div range.

o CH2 x10 attenuator

Connect the standard probe to the CH2 input. Supply an 1-kHz square-wave signal to channel 2 and adjust the vertical deflection to 6 divisions.

Adjust trimmers C52 and C51 on ATT-1 board (1) so that the square-waveform displayed is flat in the 50 mV/div range.

o CH2 x100 attenuator

Adjust trimmers C47 and C46 on ATT-1 board (1) so that the square-waveform displayed is flat in the 0.5 V/div range.

o CH3 x5 attenuator

Connect the standard probe to the CH3 input. Supply an 1-kHz square-wave signal to channel 2 and adjust the vertical deflection to 6 divisions.

Adjust trimmer C83 on CH3/CH4 board (3) so that the square-waveform displayed is flat in the 0.5 V/div range.

o CH4 x5 attenuator

Adjust trimmer C93 on CH3/CH4 board (3) so that the square-waveform displayed is flat in the 0.5 V/div range.

4.2.8 Gain and level adjustments

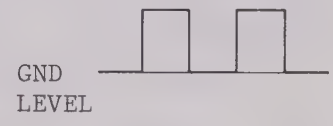
o CH2 SIG GAIN

Supply an 1-kHz square-wave to the CH2 input and set the signal source to 5 mV. Secure at least 1-mV/div sensitivity.

Connect the CH2 SIG OUT and CH1 input terminals with a BNC cable. Set the CH1 and CH2 ranges to 5 mV/div. Adjust control R723 on ANALOG board (6) so that the vertical deflection of the CH1 square-waveform is 2 divisions ±1%.

o CH2 SIG LEVEL

Change the CH1 input to DC coupling from the above condition. Adjust control R744 on ANALOG board (6) so that the DC level is "0".



o CH3 DC LEVEL

Supply a 50-kHz sinewave to the CH3 input and adjust the voltage for approximately 2-division deflection. Set the A SOURCE to CH3 and the COUPLING to AC. Set the LEVEL control so that the triggering occurs at the center of the amplitude. Adjust control R611 on ANALOG board (5) so that the triggering position does not deviate when the coupling is switched from AC to DC.

o CH4 DC LEVEL

The adjustment procedure is the same as that for CH3, except control R651 on ANALOG board (5) is used.

o NORM DC LEVEL

Supply the same input as the above and set the TRIG SOURCE to NORM. Conduct the same adjustment procedure as CH3 DC LEVEL, using control R466 on ANALOG board (4).

o FIX

Supply a 50-kHz sinewave to the CH1 input and adjust the voltage for approximately 0.4-division deflection. Set the TRIG SOURCE to FIX and adjust control R1190 on ANALOG board (9) so that triggering occurs stably.

4.2.9 Timebase

o A sweep in 1 ms range

NORM GAIN: Set a time marker to 1 ms and connect it to the CH1 input. Set the vertical mode to CH1 and the TRIG SOURCE to CH1. Set the A TIME/DIV to 1 ms/div. Adjust control R1679 on CONTROL board (12) so that each time marker aligns the graticule.

MAG REG: Set the time marker to 5 ms and A TIME/DIV to 1 ms/div. Turn the MAG key on and adjust the H POSITION control so that a pulse is aligned with the central graticule. Adjust control R1667 on CONTROL board (12) so that the pulse at the screen center does not shift when the MAG key is turned off.

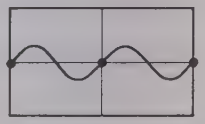
Repeat the adjustment 2 or 3 times and confirm that the pulse trace does not shift when the MAG key is turned on or off.

MAG GAIN: Set the time marker to 0.1 ms and the A TIME/DIV to 1 ms/div. Adjust control R1659 on CONTROL board (12) so that the marker pulses align the graticules.

10 µs/div: Set the time marker to 10 µs and the A TIME/DIV to 10 µs/div. Adjust trimmer C1517 on ANALOG board (11) so that the marker pulses align the graticules.

50 ns/div: Set the time marker to 50 ns and the A TIME/DIV to 50 ns/div. Adjust trimmer C1515 on ANALOG board (11) so that the marker pulses align with the graticules.

2 ns/div: Set the timer marker to 10 ns and turn the MAG key on. Adjust trimmers C1714 and C1716 on CONTROL board (12) so that the trace crosses the start, end and central points of the graticule as shown on the right. Widen the center of the sweep to adjust the trace crossing points.



Trace crosses at these points.

o B sweep

1 ms: Set the time marker to 1 ms, A TIME/DIV to 2 ms/div and B TIME/DIV to 1 ms/div. Set the DLY TIME to the minimum, turn the B FREERUN off and conduct the B triggering. Adjust control R1562 on ANALOG board (11) so that the time marker align the graticule.

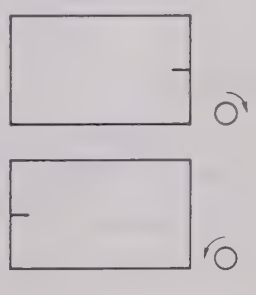
10 µs: Set the time marker to 10 µs, A TIME/DIV to 20 µs/div and B TIME/DIV to 10 µs/div. Adjust trimmer C1557 on ANALOG board (11) so that the time marker align the graticule.

50 ns: Set the time marker to 50 ns, A TIME/DIV to 0.1 µs/div and B TIME/DIV to 50 ns/div. Adjust trimmer C1555 on ANALOG board (11) so that the time marker align the graticule.

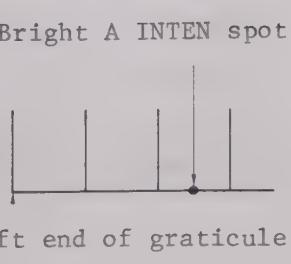
o Sweep starting point:

A/B adjustment: Set the A TIME/DIV to 1 ms, B TIME/DIV to 0.5 ms and sweep mode to ALT. Set the sweep to freerun and adjust control R1491 on ANALOG board (10) so that the A and B sweep starting points are aligned.

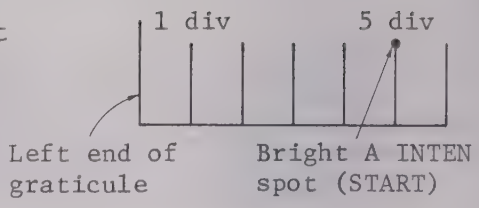
H POS CENTER: Adjust control R1630 on CONTROL board (12) so that the trace is shifted by the same distance horizontally when the H POSITION control is turned fully clockwise and counterclockwise as shown on the right.



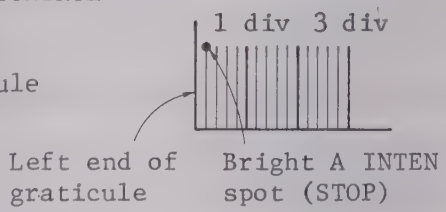
DLY START: Set the time marker to 1 ms and connect it to the CH1 input. Set the CH1 to 1 ms/div, display mode to A INTEN and B sweep time to 10 µs/div. A bright spot which is the A INTEN portion appears on the screen as shown on the right.



Set the delay time to 5 ms under the above conditions. Adjust control R2000 on CONTROL board (15) so that the bright spot is positioned on the fifth graticule from the left end of the screen.



DLY STOP: Change the time marker to 0.2 ms and the delay time to 0.2 ms from the above conditions. Adjust control R2037 on CONTROL board (15) so that the bright spot is positioned on the 0.2 division graticule from the left end of the screen.



4.2.10 X-Y mode

X-Y POSITION

Set the CH1 and CH2 to 5 mV/div and DC coupling, and the A TIME/DIV to 1 ms/div. Align the sweep starting point on the screen left end using the horizontal POSITION control. Adjust control R1493 on ANALOG board (10) so that the bright spot appears at the center of the screen when the vertical mode is switched to X-Y.

X-Y GAIN

Supply a 20-mV, 1-kHz calibration signal to channel 1. Adjust control R763 on ANALOG board (6) so that the horizontal deflection is 4 divisions.

PHASE

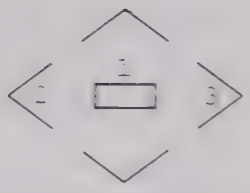
Set the CH1 and CH2 to 5 mV/div and DC coupling. Supply same 50-kHz signals to both channels using a T-branch. Set the X and Y deflections to 6 divisions. Adjust control R770 on ANALOG board (6) so that the X-Y phase difference is 0°.

Since this adjustment influences previous adjustments, repeat the X-Y POSITION and GAIN adjustments.

4.3.11 CAL adjustment

CAL SIG

Press SELECT key 1 to proceed to the next menu. Pressing the 2 , 3 and CH1 GND keys simultaneously stops the CAL oscillation. Adjust control R2345 on CONTROL board (17) so that the voltage across the CAL terminal and the ground is 0.300 V when measured using a digital voltmeter.

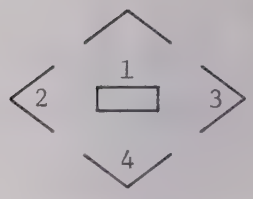


Adjustments of the A/D section must be conducted with the above condition.

4.3 Software Function Adjustment

4.3.1 Switching to the adjustment mode

Turn the power on, off and on while the GND Key is pressed. Press the SELECT key 1 to display the main menu. Then, press the <2 , 3> and CH1 GND keys simultaneously.



Dots appear on the graticule intersections and the adjustment mode is ready to operate. (The above is not required if the adjustment is conducted following the CA SIG adjustment.)

Note: Be sure to conduct the initialization (by turning the power on, off and on while pressing the GND key) before setting to the adjustment mode.

4.3.2 Adjustment procedures

The titles represent the messages on the display.

o SET A LEVEL MIN

Supply an 1-kHz, 45 mVp-p sinewave to the CH1 input.
Set the CH1 vertical POSITION control at the central position.
Set the horizontal POSITION and A LEVEL controls so that the left edge of the trace is aligned to the leftmost, lowest dot as shown in Figure 4-1.
Press the SELECT key.

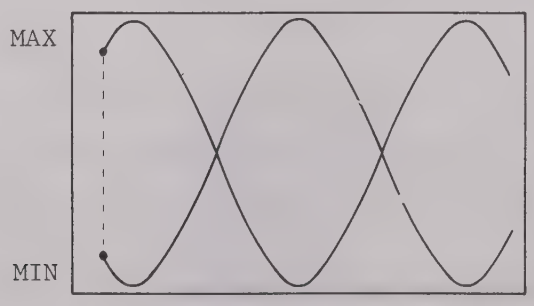


Figure 4-1 Adjustment mode display

SET A LEVEL MAX

Supply an 1-kHz, 45 mVp-p sinewave to the CH1 input. Set the horizontal POSITION and A LEVEL controls so that the left edge of the trace is aligned to the leftmost, highest dot as shown in Figure 4-1. Press the SELECT key.(see Figure 4-1)

SET B LEVEL MIN

Supply an 1-kHz, 45 mVp-p sinewave to the CH1 input. Align the left edge of the trace to the leftmost, lowest dot in the same way as A LEVEL. Press the SELECT key.

SET B LEVEL MAX

Align the left edge of the trace to the leftmost, highest dot, then press the SELECT key.

SET SEP CENTER

Align the trace left edge using the CH1 POSITION control and the B sweep trace on the central dot line using the SEPARATION control. Then, press the SELECT key.

SET SEP MAX

Align the B sweep trace on the highest dot line using the SEPARATION control, then press the SELECT key.

SET SEP MIN

Align the B sweep trace on the lowest dot line using the SEPARATION control, then press the SELECT key.

CH1, CH2 POS CENTER

Align the CH1 and CH2 traces on the central dot line using the CH1 and CH2 POSITION controls, respectively. Then, press the SELECT key.

CH1, CH2 POS MIN

Align the CH1 and CH2 traces on the lowest dot line in the same way as above, then press the SELECT key.

CH1, CH2 POS MAX

Align the CH1 and CH2 traces on the highest dot line in the same way, then press the SELECT key.

SET CH1 POS CENTER for peak adjustment

Align the CH1 trace on the central dot line using the CH1 POSITION control, then press the SELECT key.

CH1 POS MIN

Align the CH1 trace on the lowest dot line in the same way, then press the SELECT key.

CH1 POS MAX

Align the CH1 trace on the highest dot line in the same way, then press the SELECT key.

SET 1 CYCLE

Supply a signal equivalent to one cycle trace on the screen (1-kHz, 45 mVp-p signal to the CH1 input), then press the SELECT key.

4.3.3 Ground level adjustment

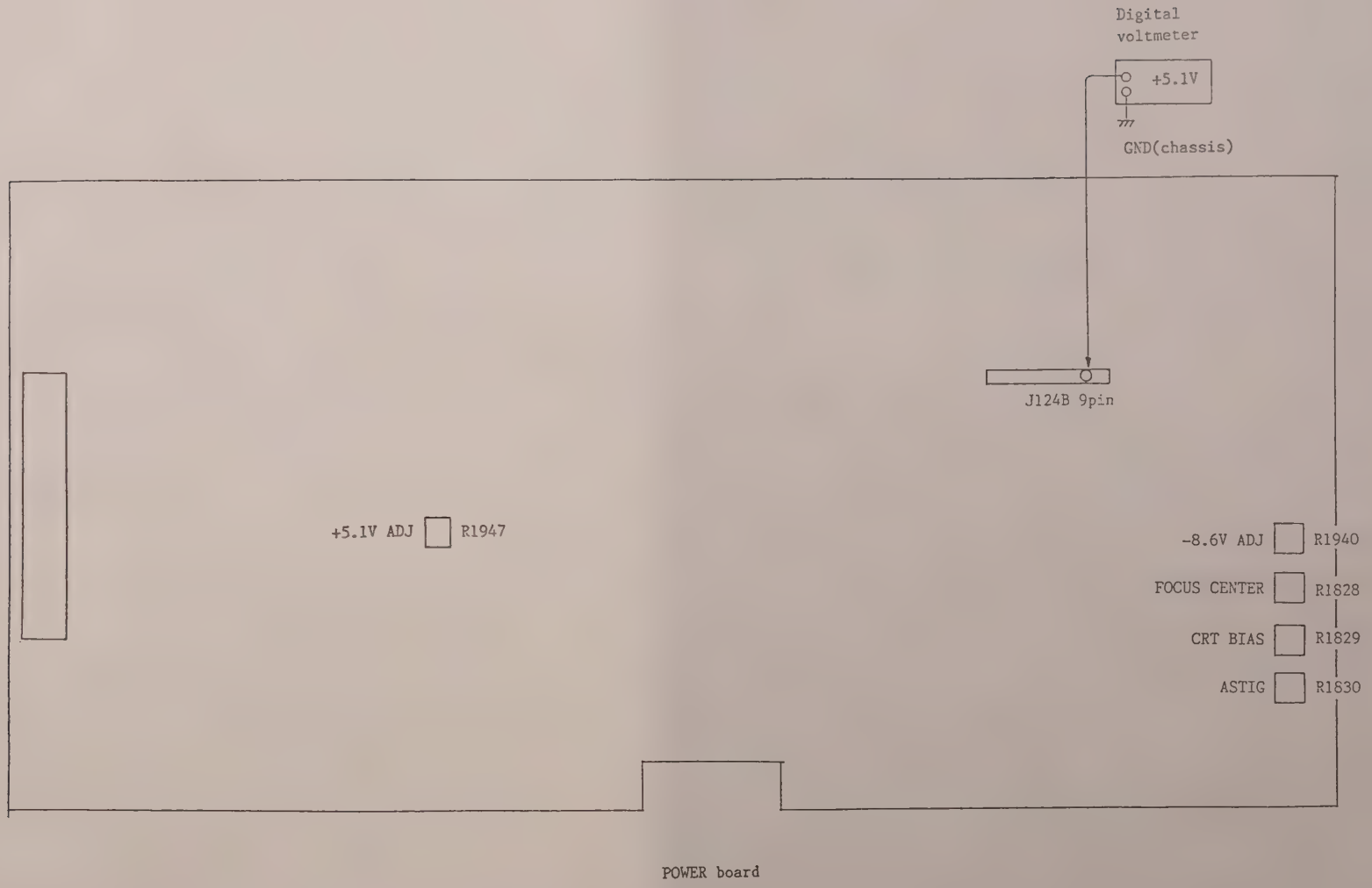
Press the SELECT key 1 to display the main menu. Position the cursor against the first item (CURSOR) on the main menu using the cursor up or down key, then press the SELECT key again.

Position the cursor against the third item (SELF CAL) from the bottom of the second menu, then press the SELECT key.

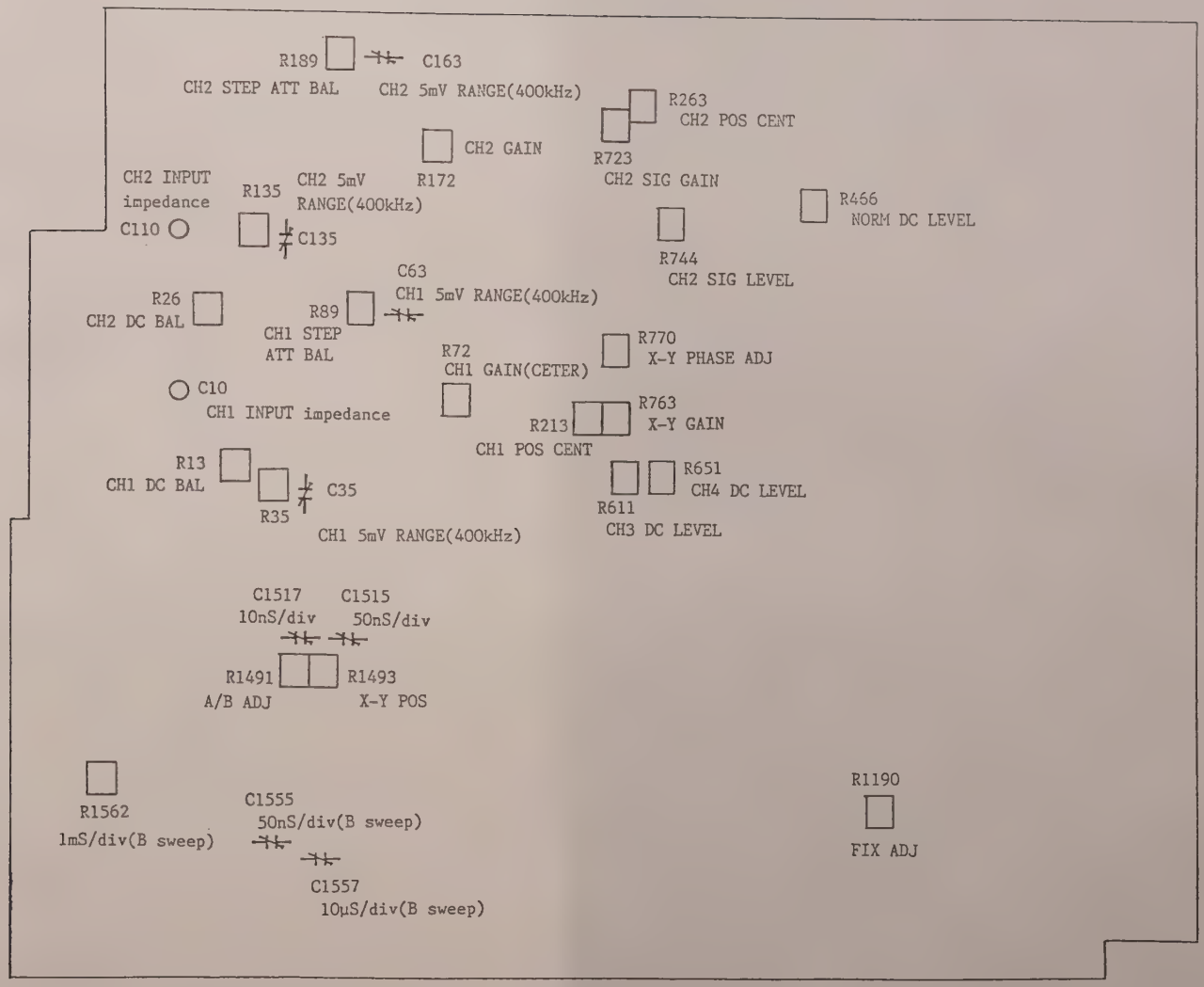
ADJUST CH1 CH2 POSITION TO ⟶ AND PUSH SELECT KEY

Align the CH1 and CH2 POSITIONs to the ⟶ position on the screen, then press the SELECT key.

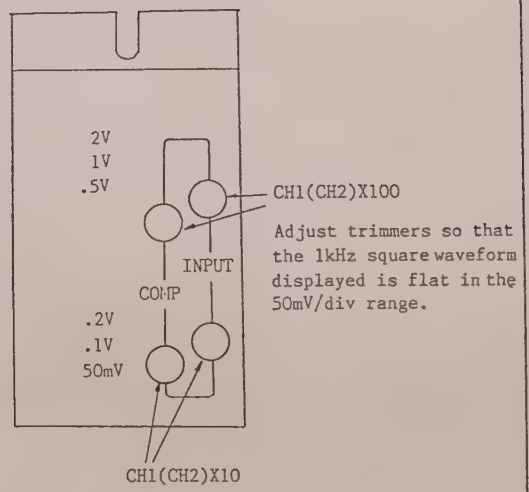
The above complete the software adjustments.



ADJUSTMENT LOCATIONS 1



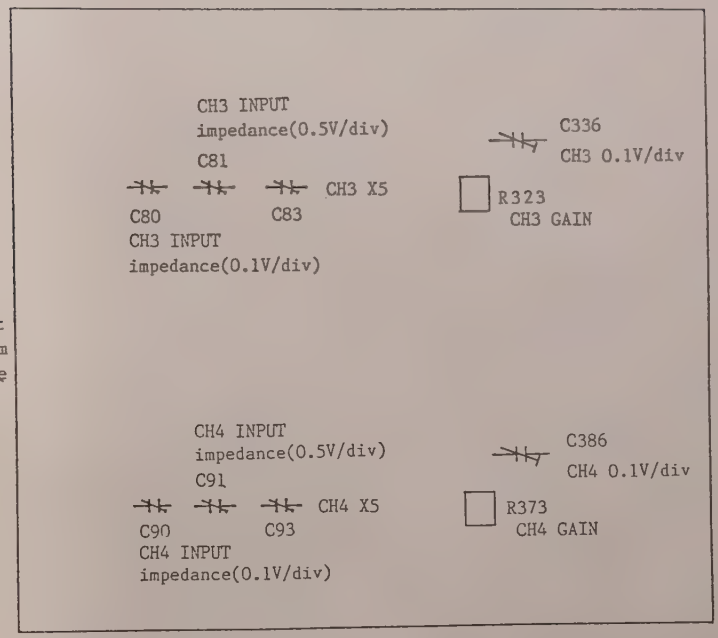
ANALOG board



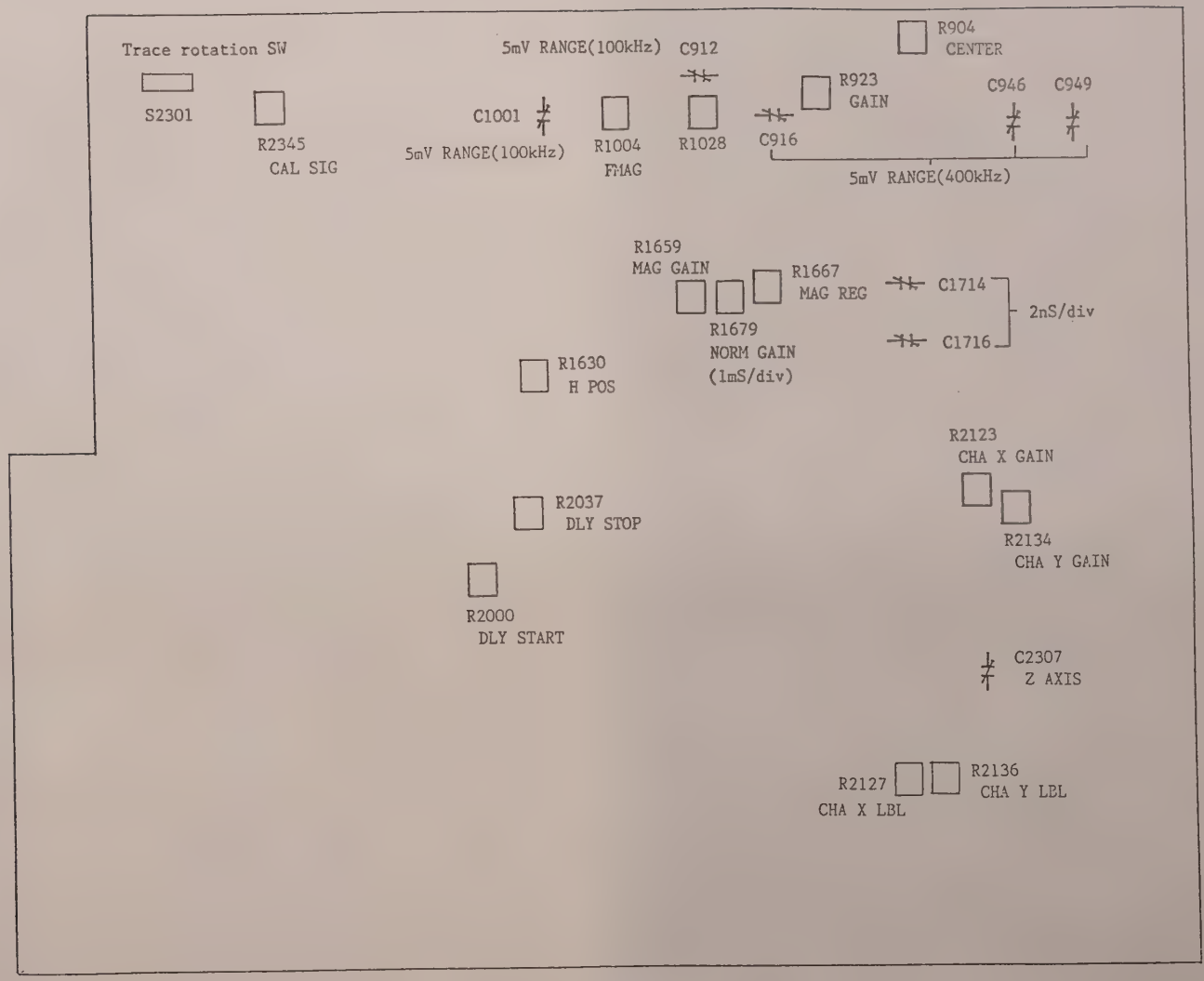
Adjust trimmers so that the 1kHz square waveform displayed is flat in the 50mV/div range.

Adjust trimmers so that the 1kHz square waveform displayed is flat in the 0.5V/div renge.

CH1/CH2 ATT-1 board



CH3/CH4 ATT board



CONTROL board

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P5516A MAIN FRAME DWG NO 4G206710-2

REF NO	QTY	PARTS NO	DESCRIPTION	
C 0003	1	ECCF1H180KC	C:FXD CER TC	18PF +-10% 50V NPO
J 0003	1	UG625UNI	CONNECTOR:COAX	BNC PANEL JACK
J 0004	1	UG625UNI	CONNECTOR:COAX	BNC PANEL JACK
J 0008	1	BNC071	CONNECTOR:COAX	BNC PLUG
J 0009	1	BNC071	CONNECTOR:COAX	BNC PLUG
J 0011	1	BNC071	CONNECTOR:COAX	BNC PLUG
J 0012	1	BNC186	CONNECTOR:COAX	
J 1950	1	ZUG2206-12A	NOISE FILTER	250V 5A
L 0454	1	85W01	DELAY LINE	DELAY TIME 90NS
MP	1	4G634506-0L	LABEL:CAUTION	HI-VOLTAGE
MP	1	4G702870-0G	COVER:HI VOLT	P5516A
P 0119	1	EMCM0320D65V	CONNECTOR	3P L=200MM
P 0120	1	4G471165	CABLE	P5516A 24P 200MM
P 0123	1	EMCM1030D65V	CONNECTOR	10P L=300MM
P 0124	1	EMCM1020D65V	CONNECTOR	10P L=200MM
P 0130	1	EMCM1050D65V	CONNECTOR	10P L=500MM
P 0132	1	EMCM0320D65V	CONNECTOR	3P L=200MM
P 0134	1	EMCM1020D65V	CONNECTOR	10P L=200MM
P 0144	1	EMCM0520D65V	CONNECTOR	5P L=200MM
P 0151	1	EMCM0220D65V	CONNECTOR	2P L=20MM
P 0153	1	EMCM0530D65V	CONNECTOR	5P L=300MM
P 0160	1	EMCM0320D65V	CONNECTOR	3P L=200MM
P 0161	1	EMCM0250D65V	CONNECTOR	2P L=500MM
P 0162	1	EMCM0250D65V	CONNECTOR	2P L=500MM
P 0175	1	EMCM0220D65V	CONNECTOR	2P L=20MM
P 1802	1	60619-1	CONNECTOR	MATE-N-LOK CONTACT SOC
P 1803	1	60619-1	CONNECTOR	MATE-N-LOK CONTACT SOC
P 1804	1	60619-1	CONNECTOR	MATE-N-LOK CONTACT SOC
P 1805	1	60619-1	CONNECTOR	MATE-N-LOK CONTACT SOC
P 1806	1	60619-1	CONNECTOR	MATE-N-LOK CONTACT SOC
P 1807	1	60619-1	CONNECTOR	MATE-N-LOK CONTACT SOC
P 1808	1	60619-1	CONNECTOR	MATE-N-LOK CONTACT SOC
P 1809	1	60619-1	CONNECTOR	MATE-N-LOK CONTACT SOC
P 1902	1	1-480303-0	CONNECTOR	MATE-N-LOK 3P PLUG
P 1903	1	60619-1	CONNECTOR	MATE-N-LOK CONTACT SOC
P 1904	1	60619-1	CONNECTOR	MATE-N-LOK CONTACT SOC
P 1905	1	60619-1	CONNECTOR	MATE-N-LOK CONTACT SOC
R 0003	1	ERDS2TJ473T	R:FXD CARBON	47K OHM 5% 1/4W
R 0007	1	ERDS2TJ4R7T	R:FXD CARBON	4.7 OHM 5% 1/4W
R 1900	1	ERDS1TJ474T	R:FXD CARBON	470K OHM 5% 1/2W

P5516A MAIN FRAME DWG NO 4G206710-2

REF NO	QTY	PARTS NO	DESCRIPTION	
S 1901	1	ESB70702V	PUSHB SW	DPST 3A-250V AC
V 1801	1	150DMB31	CRT	150MM 100MHZ
XF	1	FEK031.1663	FUSE HOLDER CAP	5X20MM FUSE
XF	1	FEU031.1653	FUSE HOLDER	SEV,VDE,SEMKO,UL AND

P5516A CABLE ASSY DWG NO 4G206711-1

REF NO	QTY	PARTS NO	DESCRIPTION	
E	48	EMCKNM05D	CONNECTOR	PIN
E	28	48051	CONNECTOR	PV TERMINAL (REEL TY
P	4	EMCHUM0201W	CONNECTOR	LATCH HOUSING 2PIN
P	9	EMCHUM0301W	CONNECTOR	LATCH HOUSING 3PIN
P	4	EMCHUM0601W	CONNECTOR	LATCH HOUSING 6PIN
P	4	65039-033	CONNECTOR	LATCH HOUSING 4P
P	4	65039-034	CONNECTOR	LATCH HOUSING 3P
T 1801	1	4G431295	COIL	P5220A ROTATION

P5516A ANALOG BOARD DWG NO 4G206712-1

REF NO	QTY	PARTS NO	DESCRIPTION	
	2	4G618461-1C	SHIELD	P5516A ANLG PCB-2
C 0010	1	TC-PC032H	C:VAR AIR	1.7PF
C 0012	1	ECKR2H102MD	C:FXD CER HI-K	1000PF +-20% 500V
C 0013	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0014	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0020	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0023	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0025	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0026	1	ECEA1CK101	C:FXD AL ELECT	100UF +-20% 16V
C 0028	1	ECCF1H030CC	C:FXD CER TC	3PF +-0.25PF 50V NPO
C 0030	1	ECCF1H120KC	C:FXD CER TC	12PF +-10% 50V NPO
C 0031	1	ECCF1H330KC	C:FXD CER TC	33PF +-10% 50V NPO
C 0032	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 0033	1	ECKF1H102ZF	C:FXD CER HI-K	1000PF +80-20% 50V
C 0035	1	ECV1ZW20X53T	C:VAR CER	20.5PF-3.3PF 250V
C 0037	1	ECCF1H180KC	C:FXD CER TC	18PF +-10% 50V NPO
C 0038	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 0039	1	ECCF1H680KC	C:FXD CER TC	68PF +-10% 50V NPO
C 0043	1	ECEA1CKS470	C:FXD AL ELECT	47UF +-20% 16V
C 0045	1	ECCF1H150KC	C:FXD CER TC	15PF +-10% 50V NPO
C 0047	1	ECCF1H180KC	C:FXD CER TC	18PF +-10% 50V NPO
C 0050	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0051	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0053	1	ECKF1H102ZF	C:FXD CER HI-K	1000PF +80-20% 50V
C 0054	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 0057	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0060	1	ECCR1H101KC	C:FXD CER TC	100PF +-10% 50V NPO
C 0061	1	ECCR1H101KC	C:FXD CER TC	100PF +-10% 50V NPO
C 0063	1	ECV1ZW20X53T	C:VAR CER	20.5PF-3.3PF 250V
C 0068	1	ECCF1H101KC	C:FXD CER TC	100PF +-10% 50V NPO
C 0069	1	ECCF1H101KC	C:FXD CER TC	100PF +-10% 50V NPO
C 0071	1	ECCF1H470KC	C:FXD CER TC	47PF +-10% 50V NPO
C 0073	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0075	1	ECCF1H090DC	C:FXD CER TC	9PF +-0.5PF 50V NPO
C 0076	1	ECCF1H090DC	C:FXD CER TC	9PF +-0.5PF 50V NPO
C 0083	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0084	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0088	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0091	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0092	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0093	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V

P5516A ANALOG BOARD DWG NO 4G206712-1

REF NO	QTY	PARTS NO	DESCRIPTION	
C 0096	1	ECEA1CG221S	C:FXD AL ELECT	220UF +-20% 16V
C 0097	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0101	1	ECKF1H561KB	C:FXD CER HI-K	560PF +-10% 50V
C 0102	1	ECKF1H561KB	C:FXD CER HI-K	560PF +-10% 50V
C 0103	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0110	1	TC-PC032H	C:VAR AIR	1.7PF
C 0112	1	ECKR2H102MD	C:FXD CER HI-K	1000PF +-20% 500V
C 0113	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0114	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0123	1	ECFF1E104ZF	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0125	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0128	1	ECCF1H030CC	C:FXD CER TC	3PF +-0.25PF 50V NPO
C 0130	1	ECCF1H120KC	C:FXD CER TC	12PF +-10% 50V NPO
C 0131	1	ECCF1H330KC	C:FXD CER TC	33PF +-10% 50V NPO
C 0132	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 0133	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0133	1	ECKF1H102ZF	C:FXD CER HI-K	1000PF +80-20% 50V
C 0135	1	ECV1ZW20X53T	C:VAR CER	20.5PF-3.3PF 250V
C 0137	1	ECCF1H180KC	C:FXD CER TC	18PF +-10% 50V NPO
C 0138	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 0139	1	ECCF1H680KC	C:FXD CER TC	68PF +-10% 50V NPO
C 0143	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0145	1	ECCF1H150KC	C:FXD CER TC	15PF +-10% 50V NPO
C 0147	1	ECCF1H180KC	C:FXD CER TC	18PF +-10% 50V NPO
C 0150	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0151	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0153	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0153	1	ECKF1H102ZF	C:FXD CER HI-K	1000PF +80-20% 50V
C 0154	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 0160	1	ECCR1H101KC	C:FXD CER TC	100PF +-10% 50V NPO
C 0161	1	ECCR1H101KC	C:FXD CER TC	100PF +-10% 50V NPO
C 0163	1	ECV1ZW20X53T	C:VAR CER	20.5PF-3.3PF 250V
C 0168	1	ECCF1H101KC	C:FXD CER TC	100PF +-10% 50V NPO
C 0169	1	ECCF1H101KC	C:FXD CER TC	100PF +-10% 50V NPO
C 0171	1	ECCF1H470KC	C:FXD CER TC	47PF +-10% 50V NPO
C 0173	1	ECFF1E104ZF	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0175	1	ECCF1H090DC	C:FXD CER TC	9PF +-0.5PF 50V NPO
C 0176	1	ECCF1H090DC	C:FXD CER TC	9PF +-0.5PF 50V NPO
C 0177	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0183	1	ECFF1E104ZF	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0188	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0191	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50

P5516A ANALOG BOARD DWG NO 4G206712-1

REF NO	QTY	PARTS NO	DESCRIPTION	
C 0192	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0193	1	ECFF1E104ZF	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0196	1	ECEA1CG221S	C:FXD AL ELECT	220UF +-20% 16V
C 0197	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0200	1	ECCF1H060DC	C:FXD CER TC	6PF +-0.5PF 50V NPO
C 0201	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 0202	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 0203	1	ECQM1H153KZ	C:FXD FLM	0.015UF 10% 50V
C 0204	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0205	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0210	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0213	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0223	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0233	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0243	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0250	1	ECCF1H060DC	C:FXD CER TC	6PF +-0.5PF 50V NPO
C 0251	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 0252	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 0253	1	ECQM1H153KZ	C:FXD FLM	0.015UF 10% 50V
C 0255	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0263	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0273	1	ECEA1HKS100	C:FXD AL ELECT	10UF +-20% 50V
C 0283	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0303	1	ECEA1AU222	C:FXD AL ELECT	2200UF +-20% 10V
C 0313	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0323	1	ECEA1CKS470	C:FXD AL ELECT	47UF +-20% 16V
C 0333	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0343	1	ECEA1CKS470	C:FXD AL ELECT	47UF +-20% 16V
C 0353	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0363	1	ECEA1HKS100	C:FXD AL ELECT	10UF +-20% 50V
C 0373	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0383	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0393	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0401	1	ECKF1H221KB	C:FXD CER HI-K	220PF +-10% 50V
C 0403	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0405	1	ECKF1H221KB	C:FXD CER HI-K	220PF +-10% 50V
C 0406	1	ECCF1H020CC	C:FXD CER TC	2PF +-0.25PF 50V NPO
C 0409	1	ECKF1H221KB	C:FXD CER HI-K	220PF +-10% 50V
C 0413	1	ECKF1H221KB	C:FXD CER HI-K	220PF +-10% 50V
C 0423	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0425	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0433	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V

P5516A ANALOG BOARD DWG NO 4G206712-1

REF NO	QTY	PARTS NO	DESCRIPTION	
C 0440	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 0441	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0443	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0444	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0453	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0454	1	ECCF1H060DC	C:FXD CER TC	6PF +-0.5PF 50V NPO
C 0461	1	ECCF1H060DC	C:FXD CER TC	6PF +-0.5PF 50V NPO
C 0506	1	ECBT1H100JC5	C:FXD CER TC	10PF +-5% 50V NPO
C 0522	1	ECCF1H180KC	C:FXD CER TC	18PF +-10% 50V NPO
C 0533	1	ECCR1H101KC	C:FXD CER TC	100PF +-10% 50V NPO
C 0546	1	ECBT1H100JC5	C:FXD CER TC	10PF +-5% 50V NPO
C 0562	1	ECCF1H180KC	C:FXD CER TC	18PF +-10% 50V NPO
C 0570	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0573	1	ECCR1H101KC	C:FXD CER TC	100PF +-10% 50V NPO
C 0605	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0633	1	ECCR1H101KC	C:FXD CER TC	100PF +-10% 50V NPO
C 0673	1	ECCR1H101KC	C:FXD CER TC	100PF +-10% 50V NPO
C 0675	1	ECCR1H101KC	C:FXD CER TC	100PF +-10% 50V NPO
C 0680	1	ECCF1H560KC	C:FXD CER TC	56PF +-10% 50V NPO
C 0685	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 0686	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 0698	1	ECCF1H560KC	C:FXD CER TC	56PF +-10% 50V NPO
C 0723	1	ECBT1H100JC5	C:FXD CER TC	10PF +-5% 50V NPO
C 0728	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 0729	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 0749	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 0751	1	ECQM1H472KZ	C:FXD FLM	4700PF 10% 50V
C 0770	1	ECQM1H102KZ	C:FXD FLM	1000PF 10% 50V
C 0804	1	ECEA1CKS470	C:FXD AL ELECT	47UF +-20% 16V
C 0805	1	ECEA1CKS470	C:FXD AL ELECT	47UF +-20% 16V
C 0806	1	ECCR1H680K	C:FXD CER TC	68PF +-10% 50V SL
C 0807	1	ECEA0JU471	C:FXD AL ELECT	470UF +-20% 6.3V
C 0810	1	ECKF1H821KB	C:FXD CER HI-K	820PF +-10% 50V
C 0811	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0813	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0814	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0816	1	ECCF1H220KC	C:FXD CER TC	22PF +-10% 50V NPO
C 0817	1	ECCF1H220KC	C:FXD CER TC	22PF +-10% 50V NPO
C 0818	1	ECCF1H220KC	C:FXD CER TC	22PF +-10% 50V NPO
C 0819	1	ECCF1H220KC	C:FXD CER TC	22PF +-10% 50V NPO
C 0825	1	ECCR1H101KC	C:FXD CER TC	100PF +-10% 50V NPO
C 0835	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V

P5516A ANALOG BOARD DWG NO 4G206712-1

REF NO	QTY	PARTS NO	DESCRIPTION
C 0840	1	ECFZ1E104ZFB	C:FXD CER MULTI 0.1UF +80%-20% 50V
C 0842	1	ECFZ1E104ZFB	C:FXD CER MULTI 0.1UF +80%-20% 50V
C 0844	1	ECFZ1E104ZFB	C:FXD CER MULTI 0.1UF +80%-20% 50V
C 0846	1	ECFZ1E104ZFB	C:FXD CER MULTI 0.1UF +80%-20% 50V
C 0860	1	ECFZ1E104ZFB	C:FXD CER MULTI 0.1UF +80%-20% 50V
C 0862	1	ECFZ1E104ZFB	C:FXD CER MULTI 0.1UF +80%-20% 50V
C 0864	1	ECFZ1E104ZFB	C:FXD CER MULTI 0.1UF +80%-20% 50V
C 0866	1	ECFZ1E104ZFB	C:FXD CER MULTI 0.1UF +80%-20% 50V
C 0881	1	ECKR1H103ZF	C:FXD CER HI-K 10000PF +80% -20% 50
C 0883	1	ECKR1H103ZF	C:FXD CER HI-K 10000PF +80% -20% 50
C 1104	1	ECKR1H103ZF	C:FXD CER HI-K 10000PF +80% -20% 50
C 1106	1	ECEA1HKS4R7E	C:FXD AL ELECT 4.7UF +-20% 50V
C 1107	1	ECQM1H102KZ	C:FXD FLM 1000PF 10% 50V
C 1111	1	ECCR1H471K	C:FXD CER TC 470PF +-10% 50V SL
C 1113	1	ECEA1HKS4R7E	C:FXD AL ELECT 4.7UF +-20% 50V
C 1121	1	ECEA1HKS010E	C:FXD AL ELECT 1UF +-20% 50V
C 1122	1	ECEA1CKS220	C:FXD AL ELECT 22UF +-20% 16V
C 1123	1	ECEA1CK101	C:FXD AL ELECT 100UF +-20% 16V
C 1124	1	ECEA1CKS220	C:FXD AL ELECT 22UF +-20% 16V
C 1127	1	ECEA1HKS010E	C:FXD AL ELECT 1UF +-20% 50V
C 1128	1	ECEA1HKS010E	C:FXD AL ELECT 1UF +-20% 50V
C 1129	1	ECKR1H103ZF	C:FXD CER HI-K 10000PF +80% -20% 50
C 1147	1	ECEA1CKS100E	C:FXD AL ELECT 10UF +-20% 16V
C 1148	1	ECEA1CKS100E	C:FXD AL ELECT 10UF +-20% 16V
C 1150	1	ECCF1H010CC	C:FXD CER TC 1PF +-0.25PF 50V NPO
C 1151	1	ECCF1H010CC	C:FXD CER TC 1PF +-0.25PF 50V NPO
C 1171	1	ECCF1H330K	C:FXD CER TC 33PF +-10% 50V SL
C 1178	1	ECKR1H103ZF	C:FXD CER HI-K 10000PF +80% -20% 50
C 1194	1	ECEA1HKS4R7E	C:FXD AL ELECT 4.7UF +-20% 50V
C 1195	1	ECEA1HKS4R7E	C:FXD AL ELECT 4.7UF +-20% 50V
C 1199	1	ECEA1CKS100E	C:FXD AL ELECT 10UF +-20% 16V
C 1204	1	ECKR1H103ZF	C:FXD CER HI-K 10000PF +80% -20% 50
C 1206	1	ECEA1HKS4R7E	C:FXD AL ELECT 4.7UF +-20% 50V
C 1207	1	ECQM1H102KZ	C:FXD FLM 1000PF 10% 50V
C 1211	1	ECCR1H471K	C:FXD CER TC 470PF +-10% 50V SL
C 1213	1	ECEA1HKS4R7E	C:FXD AL ELECT 4.7UF +-20% 50V
C 1220	1	ECKR1H103ZF	C:FXD CER HI-K 10000PF +80% -20% 50
C 1229	1	ECKR1H103ZF	C:FXD CER HI-K 10000PF +80% -20% 50
C 1247	1	ECEA1CKS100E	C:FXD AL ELECT 10UF +-20% 16V
C 1248	1	ECEA1CKS100E	C:FXD AL ELECT 10UF +-20% 16V
C 1250	1	ECCF1H010CC	C:FXD CER TC 1PF +-0.25PF 50V NPO
C 1270	1	ECFZ1E104ZFB	C:FXD CER MULTI 0.1UF +80%-20% 50V

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REF NO	QTY	PARTS NO	DESCRIPTION	
C 1271	1	ECCF1H330K	C:FXD CER TC	33PF +-10% 50V SL
C 1278	1	ECKF1H103ZF	C:FXD CER HI-K	10000PF +80-20% 50V
C 1279	1	ECKF1H103ZF	C:FXD CER HI-K	10000PF +80-20% 50V
C 1280	1	ECKF1H103ZF	C:FXD CER HI-K	10000PF +80-20% 50V
C 1300	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 1307	1	ECCF1H030CC	C:FXD CER TC	3PF +-0.25PF 50V NPO
C 1331	1	ECCR1H220K	C:FXD CER TC	22PF +-10% 50V SL
C 1332	1	ECEA1HKS4R7E	C:FXD AL ELECT	4.7UF +-20% 50V
C 1336	1	ECCR1H470K	C:FXD CER TC	47PF +-10% 50V SL
C 1339	1	ECCF1H470KC	C:FXD CER TC	47PF +-10% 50V NPO
C 1344	1	ECCR1H470K	C:FXD CER TC	47PF +-10% 50V SL
C 1365	1	ECCF1H560KC	C:FXD CER TC	56PF +-10% 50V NPO
C 1375	1	ECCF1H020CC	C:FXD CER TC	2PF +-0.25PF 50V NPO
C 1402	1	ECCF1H270KC	C:FXD CER TC	27PF +-10% 50V NPO
C 1420	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 1429	1	ECCR1H470K	C:FXD CER TC	47PF +-10% 50V SL
C 1431	1	ECCR1H181K	C:FXD CER TC	180PF +-10% 50V SL
C 1432	1	ECCF1H470KC	C:FXD CER TC	47PF +-10% 50V NPO
C 1435	1	ECBT1H100JC5	C:FXD CER TC	10PF +-5% 50V NPO
C 1438	1	ECCF1H470KC	C:FXD CER TC	47PF +-10% 50V NPO
C 1439	1	ECCR1H220K	C:FXD CER TC	22PF +-10% 50V SL
C 1448	1	ECCR1H101K	C:FXD CER TC	100PF +-10% 50V SL
C 1452	1	ECCR1H101K	C:FXD CER TC	100PF +-10% 50V SL
C 1465	1	ECCF1H560KC	C:FXD CER TC	56PF +-10% 50V NPO
C 1468	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 1475	1	ECCF1H020CC	C:FXD CER TC	2PF +-0.25PF 50V NPO
C 1479	1	ECCR1H101KC	C:FXD CER TC	100PF +-10% 50V NPO
C 1483	1	ECKF1H561KB	C:FXD CER HI-K	560PF +-10% 50V
C 1485	1	ECKF1H221KB	C:FXD CER HI-K	220PF +-10% 50V
C 1490	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 1491	1	ECEA1CKS470	C:FXD AL ELECT	47UF +-20% 16V
C 1502	1	ECCF1H100FC	C:FXD CER TC	10PF +-1.0PF 50V NPO
C 1509	1	ECKF1H102KB	C:FXD CER HI-K	1000PF +-10% 50V
C 1510	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 1511	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 1512	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 1513	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 1514	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 1515	1	ECV1ZW20X53T	C:VAR CER	20.5PF-3.3PF 250V
C 1516	1	XDM15C470K5	C:FXD MICA	47PF 10% 500V
C 1517	1	ECV1ZW60X53T	C:VAR CER	60PF-7PF 250V
C 1518	1	ECQK1102GZ	C:FXD FLM	1000PF 2% 100V

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REF NO	QTY	PARTS NO	DESCRIPTION	
C 1519	1	ECQM1H103KZ	C:FXD FLM	0.01UF 10% 50V
C 1520	1	ECQK1105GG	C:FXD FLM	1UF 2% 100V
C 1521	1	ECEA1HKS100	C:FXD AL ELECT	10UF +-20% 50V
C 1522	1	ECSF1VE224	C:FXD TA ELECT	0.22UF 20% 35V
C 1523	1	ECQM1H223KV	C:FXD FLM	0.022UF +-10% 50V
C 1524	1	ECKF1H472MD	C:FXD CER HI-K	4700PF +-20% 50V
C 1525	1	ECCR1H471K	C:FXD CER TC	470PF +-10% 50V SL
C 1526	1	ECCF1H121KC	C:FXD CER TC	120PF +-10% 50V NPO
C 1542	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 1543	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 1544	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 1546	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 1549	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 1552	1	ECCF1H100FC	C:FXD CER TC	10PF +-1.0PF 50V NPO
C 1555	1	ECV1ZW20X53T	C:VAR CER	20.5PF-3.3PF 250V
C 1556	1	XDM15C470K5	C:FXD MICA	47PF 10% 500V
C 1557	1	ECV1ZW60X53T	C:VAR CER	60PF-7PF 250V
C 1558	1	ECQK1102GZ	C:FXD FLM	1000PF 2% 100V
C 1559	1	ECQM1H103KZ	C:FXD FLM	0.01UF 10% 50V
C 1560	1	ECQK1105GG	C:FXD FLM	1UF 2% 100V
C 2433	1	ECKR1H103MD	C:FXD CER HI-K	10000PF +-20% 50V D
C 2473	1	ECKR1H103MD	C:FXD CER HI-K	10000PF +-20% 50V D
C 2480	1	ECCF1H220KC	C:FXD CER TC	22PF +-10% 50V NPO
C 9986	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 9987	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 9988	1	ECFF1E104ZF	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 9989	1	ECFF1E104ZF	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 9990	1	ECFF1E104ZF	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 9991	1	ECFF1E104ZF	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 9992	1	ECFF1E104ZF	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 9993	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 9994	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 9995	1	ECEA1HKS100	C:FXD AL ELECT	10UF +-20% 50V
C 9996	1	ECEA1CKS470	C:FXD AL ELECT	47UF +-20% 16V
C 9997	1	ECEA0JU471	C:FXD AL ELECT	470UF +-20% 6.3V
CR 0012	1	1S1544A	DIODE:SI	100MA 30V
CR 0074	1	RD5.1ESB2	DIODE:ZENER	5.0V 400MW
CR 0077	1	MA165TA	DIODE	75V 100MA
CR 0092	1	RD3.3ESB2	DIODE:ZENER	3.1V 500MW
CR 0112	1	1S1544A	DIODE:SI	100MA 30V
CR 0150	1	MA165TA	DIODE	75V 100MA
CR 0151	1	MA165TA	DIODE	75V 100MA

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REF NO	QTY	PARTS NO	DESCRIPTION	
CR 0152	1	MA165TA	DIODE	75V 100MA
CR 0174	1	RD5.1ESB2	DIODE:ZENER	5.0V 400MW
CR 0177	1	MA165TA	DIODE	75V 100MA
CR 0192	1	RD3.3ESB2	DIODE:ZENER	3.1V 500MW
CR 0250	1	MA165TA	DIODE	75V 100MA
CR 0251	1	MA165TA	DIODE	75V 100MA
CR 0252	1	MA165TA	DIODE	75V 100MA
CR 0401	1	MA165TA	DIODE	75V 100MA
CR 0402	1	MA165TA	DIODE	75V 100MA
CR 0403	1	MA165TA	DIODE	75V 100MA
CR 0404	1	MA165TA	DIODE	75V 100MA
CR 0405	1	MA165TA	DIODE	75V 100MA
CR 0406	1	MA165TA	DIODE	75V 100MA
CR 0407	1	MA165TA	DIODE	75V 100MA
CR 0408	1	MA165TA	DIODE	75V 100MA
CR 0409	1	MA165TA	DIODE	75V 100MA
CR 0410	1	MA165TA	DIODE	75V 100MA
CR 0411	1	MA165TA	DIODE	75V 100MA
CR 0412	1	MA165TA	DIODE	75V 100MA
CR 0413	1	MA165TA	DIODE	75V 100MA
CR 0414	1	MA165TA	DIODE	75V 100MA
CR 0415	1	MA165TA	DIODE	75V 100MA
CR 0416	1	MA165TA	DIODE	75V 100MA
CR 0425	1	RD8.2ESB3	DIODE:ZENER	8.2V 500MW
CR 0426	1	RD8.2ESB3	DIODE:ZENER	8.2V 500MW
CR 0427	1	RD8.2ESB3	DIODE:ZENER	8.2V 500MW
CR 0428	1	RD8.2ESB3	DIODE:ZENER	8.2V 500MW
CR 0430	1	RD8.2ESB3	DIODE:ZENER	8.2V 500MW
CR 0530	1	MA165TA	DIODE	75V 100MA
CR 0531	1	MA165TA	DIODE	75V 100MA
CR 0532	1	MA165TA	DIODE	75V 100MA
CR 0533	1	MA165TA	DIODE	75V 100MA
CR 0570	1	MA165TA	DIODE	75V 100MA
CR 0571	1	MA165TA	DIODE	75V 100MA
CR 0572	1	MA165TA	DIODE	75V 100MA
CR 0573	1	MA165TA	DIODE	75V 100MA
CR 0630	1	MA165TA	DIODE	75V 100MA
CR 0631	1	MA165TA	DIODE	75V 100MA
CR 0632	1	MA165TA	DIODE	75V 100MA
CR 0633	1	MA165TA	DIODE	75V 100MA
CR 0670	1	MA165TA	DIODE	75V 100MA
CR 0671	1	MA165TA	DIODE	75V 100MA

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REF NO	QTY	PARTS NO	DESCRIPTION	
CR 0672	1	MA165TA	DIODE	75V 100MA
CR 0673	1	MA165TA	DIODE	75V 100MA
CR 0675	1	MA165TA	DIODE	75V 100MA
CR 0676	1	MA165TA	DIODE	75V 100MA
CR 0677	1	MA165TA	DIODE	75V 100MA
CR 0678	1	MA165TA	DIODE	75V 100MA
CR 0689	1	RD7.5ESB3	DIODE:ZENER	7.5V 500MW
CR 0768	1	RD5.6ESB2	DIODE : ZENER	5.6V 400MW
CR 0769	1	RD5.6ESB2	DIODE : ZENER	5.6V 400MW
CR 0881	1	RD5.1ESB2	DIODE:ZENER	5.0V 400MW
CR 0883	1	RD5.1ESB2	DIODE:ZENER	5.0V 400MW
CR 1122	1	MA165TA	DIODE	75V 100MA
CR 1133	1	RD3.9ESB2		
CR 1330	1	MA165TA	DIODE	75V 100MA
CR 1334	1	MA700	DIODE:SCHOTTKY	30WA 15V
CR 1341	1	MA165TA	DIODE	75V 100MA
CR 1347	1	MA165TA	DIODE	75V 100MA
CR 1361	1	MA165TA	DIODE	75V 100MA
CR 1427	1	MA700	DIODE:SCHOTTKY	30WA 15V
CR 1433	1	MA165TA	DIODE	75V 100MA
CR 1435	1	MA700	DIODE:SCHOTTKY	30WA 15V
CR 1510	1	RD10ESB3	DIODE:ZENER	10V 500MW
CR 1515	1	MA165TA	DIODE	75V 100MA
CR 1519	1	MA165TA	DIODE	75V 100MA
CR 1524	1	MA165TA	DIODE	75V 100MA
CR 1527	1	MA165TA	DIODE	75V 100MA
CR 1528	1	MA165TA	DIODE	75V 100MA
CR 1529	1	MA165TA	DIODE	75V 100MA
CR 1530	1	MA165TA	DIODE	75V 100MA
CR 1543	1	RD10ESB3	DIODE:ZENER	10V 500MW
CR 1544	1	MA165TA	DIODE	75V 100MA
CR 1548	1	MA165TA	DIODE	75V 100MA
CR 1551	1	MA165TA	DIODE	75V 100MA
CR 1556	1	MA165TA	DIODE	75V 100MA
CR 1559	1	MA165TA	DIODE	75V 100MA
CR 1560	1	MA165TA	DIODE	75V 100MA
CR 2421	1	RD7.5ESB3	DIODE:ZENER	7.5V 500MW
CR 2422	1	RD7.5ESB3	DIODE:ZENER	7.5V 500MW
CR 2454	1	RD2.0ESB2		
CR 2461	1	MA165TA	DIODE	75V 100MA
CR 2470	1	MA165TA	DIODE	75V 100MA
CR 2480	1	MA165TA	DIODE	75V 100MA

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REF NO	QTY	PARTS NO	DESCRIPTION	
E	1	1G401419-2	PCB,ANALOG	P5516A
E 0050	1	4G540060-1MF	HOLDER:TR	P-059V
E 0150	1	4G540060-1MF	HOLDER:TR	P-059V
FL 0001	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 0002	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 0003	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 0007	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 0008	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 0009	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 0010	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 0011	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 0012	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 0013	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 0014	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 0015	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 0023	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 0024	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 0025	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 0026	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 0027	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 0028	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 0029	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 0030	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 0032	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 0033	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
J	3	65507-106	CONNECTOR:PIN	6P SINGLE 2.54PITCH
J 0070	1	EMCS0252M	CONNECTOR PIN	2P STRAIGHT
J 1050	1	65507-104	CONNECTOR: 4PIN	4P SINGLE 2.54PITCH
J 1080	1	65507-104	CONNECTOR: 4PIN	4P SINGLE 2.54PITCH
J 1090	1	EMCS0352M	CONNECTOR:PIN	3P STRAIGHT
J 1100	1	EMCS0652M	CONNECTOR:PIN	6P STRAIGHT
J 1131	1	EMCS0352M	CONNECTOR:PIN	3P STRAIGHT
J 1141	1	EMCS0352M	CONNECTOR:PIN	3P STRAIGHT
J 1150	1	EMCS0652M	CONNECTOR:PIN	6P STRAIGHT
J 1151	1	EMCS0352M	CONNECTOR:PIN	3P STRAIGHT
J 1160	1	EMCS0352M	CONNECTOR:PIN	3P STRAIGHT
J 1161	1	EMCS0352M	CONNECTOR:PIN	3P STRAIGHT
J 1170	1	EMCS0252M	CONNECTOR PIN	2P STRAIGHT
J 1171	1	EMCS0252M	CONNECTOR PIN	2P STRAIGHT
J 1180	1	EMCS0352M	CONNECTOR:PIN	3P STRAIGHT
J 1181	1	EMCS0352M	CONNECTOR:PIN	3P STRAIGHT

P5516A ANALOG BOARD DWG NO 4G206712-1

REF NO	QTY	PARTS NO	DESCRIPTION	
J 1190	1	EMCS0352M	CONNECTOR:PIN	3P STRAIGHT
J 1191	1	EMCS0352M	CONNECTOR:PIN	3P STRAIGHT
J 1200	1	HLEM24S-1	CONNECTOR:PIN	24P
J 1210	1	65507-103	CONNECTOR:PIN	3P SINGLE 2.54PITCH
J 1230	1	EMCS1052M	CONNECTOR	10P STRAIGHT
J 1240	1	EMCS1052M	CONNECTOR	10P STRAIGHT
J 1510	1	EMCS0252M	CONNECTOR PIN	2P STRAIGHT
J 1511	1	EMCS0252M	CONNECTOR PIN	2P STRAIGHT
J 1601	1	EMCS0352M	CONNECTOR:PIN	3P STRAIGHT
J 1611	1	EMCS0252M	CONNECTOR PIN	2P STRAIGHT
J 1621	1	EMCS0252M	CONNECTOR PIN	2P STRAIGHT
K 0030	1	FRR784D051AS	REED RELAY	DC 5V
K 0040	1	FRR784D051AS	REED RELAY	DC 5V
K 0050	1	FRR784D051AS	REED RELAY	DC 5V
K 0130	1	FRR784D051AS	REED RELAY	DC 5V
K 0140	1	FRR784D051AS	REED RELAY	DC 5V
K 0150	1	FRR784D051AS	REED RELAY	DC 5V
L 0004	1	ELEPG5R6MA	COIL:CHOKE	5.6UH 10%
L 0005	1	ELEPG5R6MA	COIL:CHOKE	5.6UH 10%
L 0006	1	ELEPG5R6MA	COIL:CHOKE	5.6UH 10%
L 0016	1	ELEH221KA	COIL:CHOKE	220UH 10%
L 0017	1	ELEH221KA	COIL:CHOKE	220UH 10%
L 0018	1	ELEPG5R6MA	COIL:CHOKE	5.6UH 10%
L 0019	1	ELEPG5R6MA	COIL:CHOKE	5.6UH 10%
L 0034	1	ELEH2R2KA	COIL:CHOKE	2.2UH 20%
L 0035	1	ELEPG5R6MA	COIL:CHOKE	5.6UH 10%
L 0036	1	ELEH221KA	COIL:CHOKE	220UH 10%
L 0037	1	ELEH221KA	COIL:CHOKE	220UH 10%
L 0038	1	ELEPG5R6MA	COIL:CHOKE	5.6UH 10%
L 0770	1	ELEH1R0KA	COIL:CHOKE	1UH
MP	1	4G618432-0B	SHIELD:ANLG PCB	P5516A
Q 0020	1	UPA71AM	TSTR:FET	PC:250MW
Q 0030	1	75A015	TSTR:SI NPN	2SC1733 SELECT
Q 0040	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0050	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 0051	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 0060	1	2SC4072	TSTR:SI NPN	DUAL NPN FT3GHZ
Q 0070	1	2SK332E	FET	40V 200MW
Q 0080	1	2SA1161		
Q 0081	1	2SA1161		

P5516A ANALOG BOARD DWG NO 4G206712-1

REF NO	QTY	PARTS NO	DESCRIPTION	
Q 0090	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0091	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0110	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V
Q 0111	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V
Q 0112	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V
Q 0120	1	UPA71AM	TSTR:FET	PC:250MW
Q 0130	1	75A015	TSTR:SI NPN	2SC1733 SELECT
Q 0140	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0150	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 0151	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 0160	1	2SC4072	TSTR:SI NPN	DUAL NPN FT3GHZ
Q 0170	1	2SK332E	FET	40V 200MW
Q 0180	1	2SA1161		
Q 0181	1	2SA1161		
Q 0190	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0191	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0201	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0202	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0203	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0204	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0205	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 0206	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 0210	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V
Q 0211	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V
Q 0212	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V
Q 0251	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0252	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0253	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0254	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0255	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 0256	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 0257	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 0258	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 0260	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V
Q 0261	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V
Q 0425	1	2SC3811-RS	TCSTR SI NPN	400MW FT 450MHZ
Q 0426	1	2SC3811-RS	TCSTR SI NPN	400MW FT 450MHZ
Q 0427	1	2SC3811-RS	TCSTR SI NPN	400MW FT 450MHZ
Q 0428	1	2SC3811-RS	TCSTR SI NPN	400MW FT 450MHZ
Q 0430	1	2SC3811-RS	TCSTR SI NPN	400MW FT 450MHZ
Q 0440	1	2SC2570A	TSTR:SI NPN	600MW FT 5GHZ
Q 0441	1	2SC2570A	TSTR:SI NPN	600MW FT 5GHZ

P5516A ANALOG BOARD DWG NO 4G206712-1

REF NO	QTY	PARTS NO	DESCRIPTION	
Q 0460	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0461	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0500	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0501	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0520	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0521	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0540	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0541	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0560	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0561	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0600	1	2SC3811-RS	TCSTR SI NPN	400MW FT 450MHZ
Q 0620	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0621	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0660	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0661	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0680	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 0681	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 0690	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0691	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0720	1	2SC1215TA	TSTR:SI NPN	PC:200MW FT:1200MHZ
Q 0721	1	2SC1215TA	TSTR:SI NPN	PC:200MW FT:1200MHZ
Q 0730	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 0731	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 0740	1	2SC1215TA	TSTR:SI NPN	PC:200MW FT:1200MHZ
Q 0741	1	2SC1215TA	TSTR:SI NPN	PC:200MW FT:1200MHZ
Q 0760	1	2SA838TA	TSTR:SI PNP	PC:250MW FT:300MHZ
Q 0761	1	2SA838TA	TSTR:SI PNP	PC:250MW FT:300MHZ
Q 0802	1	UN4111	RESISTOR BUILT-IN TSTR	300MW 50V
Q 0807	1	2SC1359-AB	TSTR:SI NPN	PC:250MW FT:300MHZ
Q 0809	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 0810	1	2SC1359TA-AB	TSTR:SI NPN	PC:250MW FT:300MHZ
Q 0823	1	2SC3811-RS	TCSTR SI NPN	400MW FT 450MHZ
Q 0824	1	2SC3811-RS	TCSTR SI NPN	400MW FT 450MHZ
Q 0830	1	2SC3811-RS	TCSTR SI NPN	400MW FT 450MHZ
Q 1104	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 1107	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 1108	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 1109	1	UN4111	RESISTOR BUILT-IN TSTR	300MW 50V
Q 1110	1	UN4111	RESISTOR BUILT-IN TSTR	300MW 50V
Q 1114	1	2SK333F	FET	80V 200MW
Q 1115	1	2SD1010-RS	TSTR:SI PNP	PC:400MW HFE:1000
Q 1170	1	AN78L05	IC:V RGLTR	0.1A +5V TO-92

P5516A ANALOG BOARD DWG NO 4G206712-1

REF NO	QTY	PARTS NO	DESCRIPTION	
Q 1188	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V
Q 1189	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V
Q 1192	1	2SC1215TA	TSTR:SI NPN	PC:200MW FT:1200MHZ
Q 1193	1	2SA838TA	TSTR:SI PNP	PC:250MW FT:300MHZ
Q 1204	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 1207	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 1208	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 1209	1	UN4111	RESISTOR BUILT-IN TSTR	300MW 50V
Q 1210	1	UN4111	RESISTOR BUILT-IN TSTR	300MW 50V
Q 1214	1	2SK333F	FET	80V 200MW
Q 1270	1	AN78L05	IC:V RGLTR	0.1A +5V TO-92
Q 1310	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 1311	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 1320	1	2SC1359TA-AB	TSTR:SI NPN	PC:250MW FT:300MHZ
Q 1325	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 1326	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 1336	1	2SC3811-RS	TCSTR SI NPN	400MW FT 450MHZ
Q 1340	1	2SC2901	TSTR:SI NPN	PC:600MW FT:750MHZ
Q 1341	1	2SC2901	TSTR:SI NPN	PC:600MW FT:750MHZ
Q 1345	1	2SC3811-RS	TCSTR SI NPN	400MW FT 450MHZ
Q 1350	1	2SK332F		
Q 1356	1	2SC1359TA-AB	TSTR:SI NPN	PC:250MW FT:300MHZ
Q 1360	1	2SA838TA	TSTR:SI PNP	PC:250MW FT:300MHZ
Q 1365	1	2SK301-Q	TSTR:FET	PC:250MW
Q 1370	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V
Q 1410	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 1420	1	2SC1359-AB	TSTR:SI NPN	PC:250MW FT:300MHZ
Q 1425	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 1428	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V
Q 1435	1	2SC2901	TSTR:SI NPN	PC:600MW FT:750MHZ
Q 1436	1	2SC2901	TSTR:SI NPN	PC:600MW FT:750MHZ
Q 1440	1	2SC3811-RS	TCSTR SI NPN	400MW FT 450MHZ
Q 1441	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 1445	1	2SK332F		
Q 1446	1	2SC1359-AB	TSTR:SI NPN	PC:250MW FT:300MHZ
Q 1448	1	2SC3811-RS	TCSTR SI NPN	400MW FT 450MHZ
Q 1450	1	UPA74HA	TSTR:SI NPN	PC=300MW NV=80MV
Q 1456	1	2SC1359TA-AB	TSTR:SI NPN	PC:250MW FT:300MHZ
Q 1458	1	2SA838TA	TSTR:SI PNP	PC:250MW FT:300MHZ
Q 1460	1	2SA838TA	TSTR:SI PNP	PC:250MW FT:300MHZ
Q 1465	1	2SK301-Q	TSTR:FET	PC:250MW
Q 1483	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V

P5516A ANALOG BOARD DWG NO 4G206712-1

REF NO	QTY	PARTS NO	DESCRIPTION	
Q 1484	1	2SC3811-RS	TCSTR SI NPN	400MW FT 450MHZ
Q 1485	1	2SC3811-RS	TCSTR SI NPN	400MW FT 450MHZ
Q 1486	1	2SC3811-RS	TCSTR SI NPN	400MW FT 450MHZ
Q 1487	1	2SA838TA	TSTR:SI PNP	PC:250MW FT:300MHZ
Q 1488	1	2SA838TA	TSTR:SI PNP	PC:250MW FT:300MHZ
Q 1489	1	2SA838TA	TSTR:SI PNP	PC:250MW FT:300MHZ
Q 1510	1	2SC1359-AB	TSTR:SI NPN	PC:250MW FT:300MHZ
Q 1515	1	2SA1246TU	TSTR:SI PNP	PC:400MW FT:100MHZ
Q 1517	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V
Q 1519	1	2SA1246TU	TSTR:SI PNP	PC:400MW FT:100MHZ
Q 1520	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V
Q 1522	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V
Q 1524	1	2SA1246TU	TSTR:SI PNP	PC:400MW FT:100MHZ
Q 1526	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V
Q 1527	1	2SA1246TU	TSTR:SI PNP	PC:400MW FT:100MHZ
Q 1528	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V
Q 1529	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V
Q 1530	1	2SC828A-RS	TSTR:SI NPN	PC:250MW FT:220MHZ
Q 1535	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V
Q 1536	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V
Q 1537	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V
Q 1543	1	2SC1359TA-AB	TSTR:SI NPN	PC:250MW FT:300MHZ
Q 1544	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V
Q 1545	1	2SA1246TU	TSTR:SI PNP	PC:400MW FT:100MHZ
Q 1547	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V
Q 1548	1	2SA1246TU	TSTR:SI PNP	PC:400MW FT:100MHZ
Q 1550	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V
Q 1551	1	2SA1246TU	TSTR:SI PNP	PC:400MW FT:100MHZ
Q 1556	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V
Q 1559	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V
Q 1560	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V
Q 2410	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 2411	1	2SC2026	TSTR:SI NPN	PC:250MW FT:200CMHZ
Q 2415	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 2420	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 2421	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 2423	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 2430	1	2SC2901	TSTR:SI NPN	PC:600MW FT:750MHZ
Q 2431	1	2SK332F		
Q 2432	1	2SC1215TA	TSTR:SI NPN	PC:200MW FT:1200MHZ
Q 2450	1	2SC2901	TSTR:SI NPN	PC:600MW FT:750MHZ
Q 2451	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ

P5516A ANALOG BOARD DWG NO 4G206712-1

REF NO	QTY	PARTS NO	DESCRIPTION	
Q 2460	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 2461	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 2462	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 2463	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 2470	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 2472	1	2SA838TA	TSTR:SI PNP	PC:250MW FT:300MHZ
Q 2481	1	2SK332F		
R 0011	1	EROS2TKF1004	R:FXD MET FLM	1M OHM 1% 1/4W
R 0012	1	ERDS1TJ104T	R:FXD CARBON	100K OHM 5% 1/2W
R 0013	1	PK502H103H0	R:VAR CERMET	10K OHM 20% 1/2W
R 0014	1	ERDS2TJ183T	R:FXD CARBON	18K OHM 5% 1/4W
R 0015	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0022	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0023	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0024	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 0025	1	ERDS2TJ152T	R:FXD CARBON	1.5K OHM 5% 1/4W
R 0025	1	ERDS2TJ911T	R:FXD CARBON	910 OHM 5% 1/4W
R 0026	1	PK502H103H0	R:VAR CERMET	10K OHM 20% 1/2W
R 0027	1	ERDS2TJ820T	R:FXD CARBON	82 OHM 5% 1/4W
R 0028	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0029	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0030	1	EROS2TKF47R5	R:FXD MET FLM	47.5 OHM 1% 1/4W
R 0031	1	EROS2TKF47R5	R:FXD MET FLM	47.5 OHM 1% 1/4W
R 0032	1	ERDS2TJ301T	R:FXD CARBON	300 OHM 5% 1/4W
R 0033	1	ERDS2TJ301T	R:FXD CARBON	300 OHM 5% 1/4W
R 0035	1	PK502H501H0	R:VAR CERMET	500 OHM +-20% 1/2W
R 0036	1	EROS2TKF95R3	R:FXD MET FLM	95.3 OHM 1% 1/4W
R 0037	1	EROS2TKF95R3	R:FXD MET FLM	95.3 OHM 1% 1/4W
R 0038	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 0040	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 0041	1	EROS2TKF4990	R:FXD MET FLM	499 OHM 1% 1/4W
R 0042	1	EROS2TKF1002	R:FXD MET FLM	10.0K OHM 1% 1/4W
R 0043	1	EROS2TKF7151	R:FXD MET FLM	7.15K OHM 1% 1/4W
R 0045	1	EROS2TKF1070	R:FXD MET FLM	107 OHM 1% 1/4W
R 0046	1	EROS2TKF1070	R:FXD MET FLM	107 OHM 1% 1/4W
R 0047	1	EROS2TKF48R7	R:FXD MET FLM	48.7 OHM 1% 1/4W
R 0048	1	EROS2TKF59R0	R:FXD MET FLM	59.0 OHM 1% 1/4W
R 0050	1	EROS2TKF1000	R:FXD MET FLM	100 OHM 1% 1/4W
R 0051	1	EROS2TKF1000	R:FXD MET FLM	100 OHM 1% 1/4W
R 0052	1	EROS2TKF4320	R:FXD MET FLM	432 OHM 1% 1/4W
R 0053	1	EROS2TKF4320	R:FXD MET FLM	432 OHM 1% 1/4W
R 0054	1	ERDS2TJ131T	R:FXD CARBON	130 OHM 5% 1/4W

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REF NO	QTY	PARTS NO	DESCRIPTION	
R 0055	1	ERDS2TJ820T	R:FXD CARBON	82 OHM 5% 1/4W
R 0056	1	EROS2TKF1001	R:FXD MET FLM	1K OHM 1% 1/4W
R 0057	1	EROS2TKF7150	R:FXD MET FLM	715 OHM 1% 1/4W
R 0058	1	ERDS2TJ183T	R:FXD CARBON	18K OHM 5% 1/4W
R 0059	1	ERDS2TJ131T	R:FXD CARBON	130 OHM 5% 1/4W
R 0060	1	EROS2TKF1000	R:FXD MET FLM	100 OHM 1% 1/4W
R 0061	1	EROS2TKF1000	R:FXD MET FLM	100 OHM 1% 1/4W
R 0062	1	EROS2TKF61R9	R:FXD MET FLM	61.9 OHM 1% 1/4W
R 0063	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 0064	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 0065	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 0066	1	ERDS2TJ152T	R:FXD CARBON	1.5K OHM 5% 1/4W
R 0067	1	ERDS2TJ152T	R:FXD CARBON	1.5K OHM 5% 1/4W
R 0068	1	ERDS2TJ241T	R:FXD CARBON	240 OHM 5% 1/4W
R 0069	1	ERDS2TJ241T	R:FXD CARBON	240 OHM 5% 1/4W
R 0070	1	ERDS2TJ220T	R:FXD CARBON	22 OHM 5% 1/4W
R 0071	1	ERDS2TJ220T	R:FXD CARBON	22 OHM 5% 1/4W
R 0072	1	PK502H202H0	R:VAR CERMET	2K OHM 20% 1/2W
R 0073	1	EROS2TKF1001	R:FXD MET FLM	1K OHM 1% 1/4W
R 0074	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0075	1	EROS2TKF51R1	R:FXD MET FLM	51.1 OHM 1% 1/4W
R 0076	1	EROS2TKF51R1	R:FXD MET FLM	51.1 OHM 1% 1/4W
R 0077	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0078	1	EROS2TKF3010	R:FXD MET FLM	301 OHM 1% 1/4W
R 0079	1	EROS2TKF3010	R:FXD MET FLM	301 OHM 1% 1/4W
R 0080	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0081	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0082	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0083	1	EROS2TKF4321	R:FXD MET FLM	4.32K OHM 1% 1/4W
R 0084	1	EROS2TKF4321	R:FXD MET FLM	4.32K OHM 1% 1/4W
R 0085	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0086	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0087	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0088	1	EROS2TKF1822	R:FXD MET FLM	18.2K OHM 1% 1/4W
R 0089	1	PK502H103H0	R:VAR CERMET	10K OHM 20% 1/2W
R 0090	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0091	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0092	1	ERDS2TJ224T	R:FXD CARBON	220K OHM 5% 1/4W
R 0093	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 0094	1	EROS2TKF1500	R:FXD MET FLM	150 OHM 1% 1/4W
R 0095	1	EROS2TKF1500	R:FXD MET FLM	150 OHM 1% 1/4W
R 0097	1	ERDS2TJ393T	R:FXD CARBON	39K OHM 5% 1/4W

P5516A ANALOG BOARD DWG NO 4G206712-1

REF NO	QTY	PARTS NO	DESCRIPTION	
R 0098	1	ERDS2TJ182T	R:FXD CARBON	1.8K OHM 5% 1/4W
R 0099	1	ERDS2TJ182T	R:FXD CARBON	1.8K OHM 5% 1/4W
R 0101	1	ERDS2TJ392T	R:FXD CARBON	3.9K OHM 5% 1/4W
R 0102	1	ERDS2TJ392T	R:FXD CARBON	3.9K OHM 5% 1/4W
R 0111	1	EROS2TKF1004	R:FXD MET FLM	1M OHM 1% 1/4W
R 0112	1	ERDS1TJ104T	R:FXD CARBON	100K OHM 5% 1/2W
R 0114	1	ERDS2TJ183T	R:FXD CARBON	18K OHM 5% 1/4W
R 0115	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0122	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0123	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0124	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 0125	1	ERDS2TJ152T	R:FXD CARBON	1.5K OHM 5% 1/4W
R 0125	1	ERDS2TJ911T	R:FXD CARBON	910 OHM 5% 1/4W
R 0127	1	ERDS2TJ820T	R:FXD CARBON	82 OHM 5% 1/4W
R 0128	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0129	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0130	1	EROS2TKF47R5	R:FXD MET FLM	47.5 OHM 1% 1/4W
R 0131	1	EROS2TKF47R5	R:FXD MET FLM	47.5 OHM 1% 1/4W
R 0132	1	ERDS2TJ301T	R:FXD CARBON	300 OHM 5% 1/4W
R 0133	1	ERDS2TJ301T	R:FXD CARBON	300 OHM 5% 1/4W
R 0135	1	PK502H501H0	R:VAR CERMET	500 OHM +-20% 1/2W
R 0136	1	EROS2TKF95R3	R:FXD MET FLM	95.3 OHM 1% 1/4W
R 0137	1	EROS2TKF95R3	R:FXD MET FLM	95.3 OHM 1% 1/4W
R 0138	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 0140	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 0141	1	EROS2TKF4990	R:FXD MET FLM	499 OHM 1% 1/4W
R 0142	1	EROS2TKF1002	R:FXD MET FLM	10.0K OHM 1% 1/4W
R 0143	1	EROS2TKF7151	R:FXD MET FLM	7.15K OHM 1% 1/4W
R 0145	1	EROS2TKF1070	R:FXD MET FLM	107 OHM 1% 1/4W
R 0146	1	EROS2TKF1070	R:FXD MET FLM	107 OHM 1% 1/4W
R 0147	1	EROS2TKF48R7	R:FXD MET FLM	48.7 OHM 1% 1/4W
R 0148	1	EROS2TKF59R0	R:FXD MET FLM	59.0 OHM 1% 1/4W
R 0150	1	EROS2TKF1000	R:FXD MET FLM	100 OHM 1% 1/4W
R 0151	1	EROS2TKF1000	R:FXD MET FLM	100 OHM 1% 1/4W
R 0152	1	EROS2TKF4320	R:FXD MET FLM	432 OHM 1% 1/4W
R 0153	1	EROS2TKF4320	R:FXD MET FLM	432 OHM 1% 1/4W
R 0154	1	ERDS2TJ131T	R:FXD CARBON	130 OHM 5% 1/4W
R 0155	1	ERDS2TJ820T	R:FXD CARBON	82 OHM 5% 1/4W
R 0156	1	EROS2TKF1001	R:FXD MET FLM	1K OHM 1% 1/4W
R 0157	1	EROS2TKF7150	R:FXD MET FLM	715 OHM 1% 1/4W
R 0158	1	ERDS2TJ183T	R:FXD CARBON	18K OHM 5% 1/4W
R 0159	1	ERDS2TJ131T	R:FXD CARBON	130 OHM 5% 1/4W

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REF NO	QTY	PARTS NO	DESCRIPTION	
R 0160	1	EROS2TKF1000	R:FXD MET FLM	100 OHM 1% 1/4W
R 0161	1	EROS2TKF1000	R:FXD MET FLM	100 OHM 1% 1/4W
R 0162	1	EROS2TKF61R9	R:FXD MET FLM	61.9 OHM 1% 1/4W
R 0163	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 0164	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 0165	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 0166	1	ERDS2TJ152T	R:FXD CARBON	1.5K OHM 5% 1/4W
R 0167	1	ERDS2TJ152T	R:FXD CARBON	1.5K OHM 5% 1/4W
R 0168	1	ERDS2TJ241T	R:FXD CARBON	240 OHM 5% 1/4W
R 0169	1	ERDS2TJ241T	R:FXD CARBON	240 OHM 5% 1/4W
R 0170	1	ERDS2TJ220T	R:FXD CARBON	22 OHM 5% 1/4W
R 0171	1	ERDS2TJ220T	R:FXD CARBON	22 OHM 5% 1/4W
R 0172	1	PK502H202H0	R:VAR CERMET	2K OHM 20% 1/2W
R 0173	1	EROS2TKF1001	R:FXD MET FLM	1K OHM 1% 1/4W
R 0174	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0175	1	EROS2TKF51R1	R:FXD MET FLM	51.1 OHM 1% 1/4W
R 0176	1	EROS2TKF51R1	R:FXD MET FLM	51.1 OHM 1% 1/4W
R 0177	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0178	1	EROS2TKF3010	R:FXD MET FLM	301 OHM 1% 1/4W
R 0179	1	EROS2TKF3010	R:FXD MET FLM	301 OHM 1% 1/4W
R 0180	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0181	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0182	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0183	1	EROS2TKF4321	R:FXD MET FLM	4.32K OHM 1% 1/4W
R 0184	1	EROS2TKF4321	R:FXD MET FLM	4.32K OHM 1% 1/4W
R 0185	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0186	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0187	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0188	1	EROS2TKF1822	R:FXD MET FLM	18.2K OHM 1% 1/4W
R 0189	1	PK502H103H0	R:VAR CERMET	10K OHM 20% 1/2W
R 0190	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0191	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0192	1	ERDS2TJ2?4T	R:FXD CARBON	220K OHM 5% 1/4W
R 0193	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 0194	1	EROS2TKF1500	R:FXD MET FLM	150 OHM 1% 1/4W
R 0195	1	EROS2TKF1500	R:FXD MET FLM	150 OHM 1% 1/4W
R 0197	1	ERDS2TJ393T	R:FXD CARBON	39K OHM 5% 1/4W
R 0198	1	ERDS2TJ182T	R:FXD CARBON	1.8K OHM 5% 1/4W
R 0199	1	ERDS2TJ182T	R:FXD CARBON	1.8K OHM 5% 1/4W
R 0200	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0201	1	EROS2TKF57R6	R:FXD MET FLM	57.6 OHM 1% 1/2W
R 0202	1	EROS2TKF1271	R:FXD MET FLM	1.27K OHM 1% 1/4W

P5516A ANALOG BOARD DWG NO 4G206712-1

REF NO	QTY	PARTS NO	DESCRIPTION	
R 0203	1	EROS2TKF1271	R:FXD MET FLM	1.27K OHM 1% 1/4W
R 0204	1	EROS2TKF4992	R:FXD MET FLM	49.9K OHM 1% 1/4W
R 0205	1	EROS2TKF4992	R:FXD MET FLM	49.9K OHM 1% 1/4W
R 0206	1	EROS2TKF1003	R:FXD MET FLM	100K OHM 1% 1/4W
R 0207	1	EROS2TKF1003	R:FXD MET FLM	100K OHM 1% 1/4W
R 0208	1	EROS2TKF1003	R:FXD MET FLM	100K OHM 1% 1/4W
R 0209	1	EROS2TKF1431	R:FXD MET FLM	1.43K OHM 1% 1/4W
R 0210	1	EROS2TKF1431	R:FXD MET FLM	1.43K OHM 1% 1/4W
R 0211	1	EROS2TKF1433	R:FXD MET FLM	143K OHM 1% 1/4W
R 0212	1	EROS2TKF1433	R:FXD MET FLM	143K OHM 1% 1/4W
R 0213	1	PK502H103H0	R:VAR CERMET	10K OHM 20% 1/2W
R 0215	1	ERDS2TJ361T	R:FXD CARBON	360 OHM 5% 1/4W
R 0216	1	ERDS2TJ361T	R:FXD CARBON	360 OHM 5% 1/4W
R 0218	1	EROS2TKF2610	R:FXD MET FLM	261 OHM 1% 1/4W
R 0219	1	EROS2TKF2610	R:FXD MET FLM	261 OHM 1% 1/4W
R 0220	1	EROS2TKF4991	R:FXD MET FLM	4.99K OHM 1% 1/4W
R 0221	1	EROS2TKF4321	R:FXD MET FLM	4.32K OHM 1% 1/4W
R 0222	1	ERDS2TJ220T	R:FXD CARBON	22 OHM 5% 1/4W
R 0223	1	ERDS2TJ220T	R:FXD CARBON	22 OHM 5% 1/4W
R 0225	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0226	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0227	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0228	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0250	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0251	1	EROS2TKF57R6	R:FXD MET FLM	57.6 OHM 1% 1/2W
R 0252	1	EROS2TKF1271	R:FXD MET FLM	1.27K OHM 1% 1/4W
R 0253	1	EROS2TKF1271	R:FXD MET FLM	1.27K OHM 1% 1/4W
R 0254	1	EROS2TKF4992	R:FXD MET FLM	49.9K OHM 1% 1/4W
R 0255	1	EROS2TKF4992	R:FXD MET FLM	49.9K OHM 1% 1/4W
R 0256	1	EROS2TKF1003	R:FXD MET FLM	100K OHM 1% 1/4W
R 0257	1	EROS2TKF1003	R:FXD MET FLM	100K OHM 1% 1/4W
R 0258	1	EROS2TKF1003	R:FXD MET FLM	100K OHM 1% 1/4W
R 0259	1	EROS2TKF1431	R:FXD MET FLM	1.43K OHM 1% 1/4W
R 0260	1	EROS2TKF1431	R:FXD MET FLM	1.43K OHM 1% 1/4W
R 0261	1	EROS2TKF1433	R:FXD MET FLM	143K OHM 1% 1/4W
R 0262	1	EROS2TKF1433	R:FXD MET FLM	143K OHM 1% 1/4W
R 0263	1	PK502H103H0	R:VAR CERMET	10K OHM 20% 1/2W
R 0265	1	ERDS2TJ361T	R:FXD CARBON	360 OHM 5% 1/4W
R 0266	1	ERDS2TJ361T	R:FXD CARBON	360 OHM 5% 1/4W
R 0268	1	EROS2TKF2610	R:FXD MET FLM	261 OHM 1% 1/4W
R 0269	1	EROS2TKF2610	R:FXD MET FLM	261 OHM 1% 1/4W
R 0270	1	EROS2TKF4991	R:FXD MET FLM	4.99K OHM 1% 1/4W

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REF NO	QTY	PARTS NO	DESCRIPTION	
R 0271	1	EROS2TKF4321	R:FXD MET FLM	4.32K OHM 1% 1/4W
R 0272	1	EROS2TKF4991	R:FXD MET FLM	4.99K OHM 1% 1/4W
R 0273	1	EROS2TKF4321	R:FXD MET FLM	4.32K OHM 1% 1/4W
R 0274	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 0275	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0276	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0277	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0278	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0282	1	ERDS2TJ220T	R:FXD CARBON	22 OHM 5% 1/4W
R 0283	1	ERDS2TJ220T	R:FXD CARBON	22 OHM 5% 1/4W
R 0401	1	ERDS2TJ392T	R:FXD CARBON	3.9K OHM 5% 1/4W
R 0402	1	ERDS2TJ133T	R:FXD CARBON	13K OHM 5% 1/4W
R 0403	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0404	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0405	1	ERDS2TJ392T	R:FXD CARBON	3.9K OHM 5% 1/4W
R 0406	1	ERDS2TJ133T	R:FXD CARBON	13K OHM 5% 1/4W
R 0407	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0408	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0409	1	ERDS2TJ392T	R:FXD CARBON	3.9K OHM 5% 1/4W
R 0410	1	ERDS2TJ133T	R:FXD CARBON	13K OHM 5% 1/4W
R 0411	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0412	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0413	1	ERDS2TJ392T	R:FXD CARBON	3.9K OHM 5% 1/4W
R 0414	1	ERDS2TJ133T	R:FXD CARBON	13K OHM 5% 1/4W
R 0415	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0416	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0420	1	ERDS2TJ331T	R:FXD CARBON	330 OHM 5% 1/4W
R 0421	1	ERDS2TJ331T	R:FXD CARBON	330 OHM 5% 1/4W
R 0422	1	ERDS2TJ331T	R:FXD CARBON	330 OHM 5% 1/4W
R 0423	1	ERDS2TJ331T	R:FXD CARBON	330 OHM 5% 1/4W
R 0425	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 0426	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 0427	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 0428	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 0430	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 0431	1	EROS2TKF8060	R:FXD MET FLM	806 OHM 1% 1/4W
R 0432	1	EROS2TKF8060	R:FXD MET FLM	806 OHM 1% 1/4W
R 0433	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 0435	1	EROS2TKF3240	R:FXD MET FLM	324 OHM 1% 1/4W
R 0436	1	EROS2TKF3240	R:FXD MET FLM	324 OHM 1% 1/4W
R 0439	1	EROS2TKF6810	R:FXD MET FLM	681 OHM 1% 1/4W
R 0440	1	EROS2TKF5230	R:FXD MET FLM	523 OHM 1% 1/4W

P5516A ANALOG BOARD DWG NO 4G206712-1

REF NO	QTY	PARTS NO	DESCRIPTION	
R 0441	1	EROS2TKF1650	R:FXD MET FLM	165 OHM 1% 1/4W
R 0442	1	EROS2TKF3010	R:FXD MET FLM	301 OHM 1% 1/4W
R 0443	1	ERDS2TJ680T	R:FXD CARBON	68 OHM 5% 1/4W
R 0444	1	EROS1TKF1960	R:FXD MET FLM	196 OHM 1% 1/4W
R 0445	1	ERDS2TJ680T	R:FXD CARBON	68 OHM 5% 1/4W
R 0446	1	EROS2TKF3010	R:FXD MET FLM	301 OHM 1% 1/4W
R 0447	1	EROS2TKF1650	R:FXD MET FLM	165 OHM 1% 1/4W
R 0448	1	EROS2TKF5230	R:FXD MET FLM	523 OHM 1% 1/4W
R 0449	1	EROS2TKF6810	R:FXD MET FLM	681 OHM 1% 1/4W
R 0450	1	EROS2TKF90R9	R:FXD MET FLM	90.9 OHM 1% 1/4W
R 0451	1	EROS2TKF1002	R:FXD MET FLM	10.0K OHM 1% 1/4W
R 0452	1	EROS2TKF1002	R:FXD MET FLM	10.0K OHM 1% 1/4W
R 0453	1	EROS2TKF90R9	R:FXD MET FLM	90.9 OHM 1% 1/4W
R 0454	1	ERDS2TJ361T	R:FXD CARBON	360 OHM 5% 1/4W
R 0461	1	EROS2TKF2210	R:FXD MET FLM	221 OHM 1% 1/4W
R 0462	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0463	1	EROS2TKF1961	R:FXD MET FLM	1.96K OHM 1% 1/4W
R 0464	1	EROS2TKF1961	R:FXD MET FLM	1.96K OHM 1% 1/4W
R 0465	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0466	1	PK502H203H0	R:VAR CERMET	
R 0467	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0500	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0501	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0504	1	EROS2TKF66R5	R:FXD MET FLM	66.5 OHM 1% 1/4W
R 0505	1	ERDS2TJ362T	R:FXD CARBON	3.6K OHM 5% 1/4W
R 0507	1	EROS2TKF1651	R:FXD MET FLM	1.65K OHM 1% 1/4W
R 0508	1	EROS2TKF1651	R:FXD MET FLM	1.65K OHM 1% 1/4W
R 0509	1	ERDS2TJ181T	R:FXD CARBON	180 OHM 5% 1/4W
R 0510	1	ERDS2TJ181T	R:FXD CARBON	180 OHM 5% 1/4W
R 0511	1	EROS2TKF1000	R:FXD MET FLM	100 OHM 1% 1/4W
R 0512	1	EROS2TKF1000	R:FXD MET FLM	100 OHM 1% 1/4W
R 0513	1	EROS2TKF6040	R:FXD MET FLM	604 OHM 1% 1/4W
R 0521	1	EROS2TKF82R5	R:FXD MET FLM	82.5 OHM 1% 1/4W
R 0523	1	EROS2TKF1961	R:FXD MET FLM	1.96K OHM 1% 1/4W
R 0524	1	EROS2TKF1961	R:FXD MET FLM	1.96K OHM 1% 1/4W
R 0525	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0526	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0530	1	EROS2TKF4220	R:FXD MET FLM	422 OHM 1% 1/4W
R 0531	1	EROS2TKF4220	R:FXD MET FLM	422 OHM 1% 1/4W
R 0540	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0541	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0544	1	EROS2TKF66R5	R:FXD MET FLM	66.5 OHM 1% 1/4W

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REF NO	QTY	PARTS NO	DESCRIPTION	
R 0545	1	ERDS2TJ362T	R:FXD CARBON	3.6K OHM 5% 1/4W
R 0547	1	EROS2TKF1651	R:FXD MET FLM	1.65K OHM 1% 1/4W
R 0548	1	EROS2TKF1651	R:FXD MET FLM	1.65K OHM 1% 1/4W
R 0549	1	ERDS2TJ181T	R:FXD CARBON	180 OHM 5% 1/4W
R 0550	1	ERDS2TJ181T	R:FXD CARBON	180 OHM 5% 1/4W
R 0551	1	EROS2TKF1000	R:FXD MET FLM	100 OHM 1% 1/4W
R 0552	1	EROS2TKF1000	R:FXD MET FLM	100 OHM 1% 1/4W
R 0553	1	EROS2TKF6040	R:FXD MET FLM	604 OHM 1% 1/4W
R 0561	1	EROS2TKF82R5	R:FXD MET FLM	82.5 OHM 1% 1/4W
R 0563	1	EROS2TKF1961	R:FXD MET FLM	1.96K OHM 1% 1/4W
R 0564	1	EROS2TKF1961	R:FXD MET FLM	1.96K OHM 1% 1/4W
R 0565	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0566	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0570	1	EROS2TKF4220	R:FXD MET FLM	422 OHM 1% 1/4W
R 0571	1	EROS2TKF4220	R:FXD MET FLM	422 OHM 1% 1/4W
R 0600	1	ERDS2TJ432T	R:FXD CARBON	4.3K OHM 5% 1/4W
R 0602	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0604	1	ERDS2TJ181T	R:FXD CARBON	180 OHM 5% 1/4W
R 0610	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 0611	1	PK502H503H0	R VAR CERMET	50K OHM 20 %
R 0612	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0613	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0614	1	EROS2TKF75R0	R:FXD MET FLM	75.0 OHM 1% 1/4W
R 0621	1	EROS2TKF75R0	R:FXD MET FLM	75.0 OHM 1% 1/4W
R 0623	1	EROS2TKF1621	R:FXD MET FLM	1.62K OHM 1% 1/4W
R 0624	1	EROS2TKF1621	R:FXD MET FLM	1.62K OHM 1% 1/4W
R 0625	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0626	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0630	1	EROS2TKF4220	R:FXD MET FLM	422 OHM 1% 1/4W
R 0631	1	EROS2TKF4220	R:FXD MET FLM	422 OHM 1% 1/4W
R 0650	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 0651	1	PK502H503H0	R VAR CERMET	50K OHM 20 %
R 0652	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0653	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0654	1	EROS2TKF75R0	R:FXD MET FLM	75.0 OHM 1% 1/4W
R 0661	1	EROS2TKF75R0	R:FXD MET FLM	75.0 OHM 1% 1/4W
R 0663	1	EROS2TKF1621	R:FXD MET FLM	1.62K OHM 1% 1/4W
R 0664	1	EROS2TKF1621	R:FXD MET FLM	1.62K OHM 1% 1/4W
R 0665	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0666	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0670	1	EROS2TKF4220	R:FXD MET FLM	422 OHM 1% 1/4W
R 0671	1	EROS2TKF4220	R:FXD MET FLM	422 OHM 1% 1/4W

P5516A ANALOG BOARD DWG NO 4G206712-1

REF NO	QTY	PARTS NO	DESCRIPTION	
R 0675	1	EROS2TKF4220	R:FXD MET FLM	422 OHM 1% 1/4W
R 0676	1	EROS2TKF4220	R:FXD MET FLM	422 OHM 1% 1/4W
R 0677	1	ERDS2TJ183T	R:FXD CARBON	18K OHM 5% 1/4W
R 0680	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 0681	1	ERDS2TJ622T	R:FXD CARBON	6.2K OHM 5% 1/4W
R 0682	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W
R 0683	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0684	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0685	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0686	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0687	1	EROS2TKF3920	R:FXD MET FLM	392 OHM 1% 1/4W
R 0688	1	EROS2TKF3920	R:FXD MET FLM	392 OHM 1% 1/4W
R 0690	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0691	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0692	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W
R 0693	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W
R 0694	1	EROS2TKF1002	R:FXD MET FLM	10.0K OHM 1% 1/4W
R 0695	1	EROS2TKF1002	R:FXD MET FLM	10.0K OHM 1% 1/4W
R 0696	1	ERDS2TJ4R7T	R:FXD CARBON	4.7 OHM 5% 1/4W
R 0697	1	ERDS2TJ4R7T	R:FXD CARBON	4.7 OHM 5% 1/4W
R 0698	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 0720	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W
R 0721	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W
R 0722	1	EROS2TKF2430	R:FXD MET FLM	243 OHM 1% 1/4W
R 0723	1	PK502H101H0	R:VAR CERMET	100 OHM +-20% 1/2W
R 0724	1	EROS2TKF4751	R:FXD MET FLM	4.75K OHM 1% 1/4W
R 0725	1	EROS2TKF4751	R:FXD MET FLM	4.75K OHM 1% 1/4W
R 0726	1	EROS2TKF2321	R:FXD MET FLM	2.32K OHM 1% 1/4W
R 0727	1	EROS2TKF2321	R:FXD MET FLM	2.32K OHM 1% 1/4W
R 0728	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W
R 0729	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W
R 0730	1	EROS2TKF7320	R:FXD MET FLM	732 OHM 1% 1/4W
R 0731	1	EROS2TKF7320	R:FXD MET FLM	732 OHM 1% 1/4W
R 0732	1	ERDS2TJ562T	R:FXD CARBON	5.6K OHM 5% 1/4W
R 0733	1	ERDS2TJ272T	R:FXD CARBON	2.7K OHM 5% 1/4W
R 0734	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0735	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0736	1	EROS2TKF2210	R:FXD MET FLM	221 OHM 1% 1/4W
R 0737	1	EROS2TKF2210	R:FXD MET FLM	221 OHM 1% 1/4W
R 0738	1	ERDS2TJ122T	R:FXD CARBON	1.2K OHM 5% 1/4W
R 0739	1	ERDS2TJ823T	R:FXD CARBON	82K OHM 5% 1/4W
R 0740	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W

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REF NO	QTY	PARTS NO	DESCRIPTION	
R 0741	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0742	1	ERDS2TJ202T	R:FXD CARBON	2K OHM 5% 1/4W
R 0743	1	ERDS2TJ202T	R:FXD CARBON	2K OHM 5% 1/4W
R 0744	1	PK502H104H0	R:VAR CERMET	100K OHM+-20% 1/2W
R 0745	1	EROS2TKF1002	R:FXD MET FLM	10.0K OHM 1% 1/4W
R 0746	1	EROS2TKF1002	R:FXD MET FLM	10.0K OHM 1% 1/4W
R 0747	1	ERDS2TJ510T	R:FXD CARBON	51 OHM 5% 1/4W
R 0748	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 0749	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 0750	1	ERDS2TJ681T	R:FXD CARBON	680 OHM 5% 1/4W
R 0751	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 0760	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W
R 0761	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W
R 0762	1	ERDS2TJ150T	R:FXD CARBON	15 OHM 5% 1/4W
R 0763	1	PK502H101H0	R:VAR CERMET	100 OHM +-20% 1/2W
R 0764	1	EROS2TKF2551	R:FXD MET FLM	2.55K OHM 1% 1/4W
R 0765	1	EROS2TKF2551	R:FXD MET FLM	2.55K OHM 1% 1/4W
R 0766	1	EROS2TKF8250	R:FXD MET FLM	825 OHM 1% 1/4W
R 0767	1	EROS2TKF8250	R:FXD MET FLM	825 OHM 1% 1/4W
R 0768	1	ERDS2TJ511T	R:FXD CARBON	510 OHM 5% 1/4W
R 0769	1	ERDS2TJ511T	R:FXD CARBON	510 OHM 5% 1/4W
R 0770	1	PK502H101H0	R:VAR CERMET	100 OHM +-20% 1/2W
R 0801	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 0802	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 0805	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0806	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0807	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0808	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0809	1	ERDS2TJ332T	R:FXD CARBON	3.3K OHM 5% 1/4W
R 0810	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 0811	1	ERDS2TJ751T	R:FXD CARBON	750 OHM 5% 1/4W
R 0812	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W
R 0813	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 0814	1	ERDS2TJ392T	R:FXD CARBON	3.9K OHM 5% 1/4W
R 0815	1	ERDS2TJ392T	R:FXD CARBON	3.9K OHM 5% 1/4W
R 0816	1	ERDS2TJ910T	R:FXD CARBON	91 OHM 5% 1/4W
R 0817	1	ERDS2TJ910T	R:FXD CARBON	91 OHM 5% 1/4W
R 0818	1	ERDS2TJ910T	R:FXD CARBON	91 OHM 5% 1/4W
R 0819	1	ERDS2TJ910T	R:FXD CARBON	91 OHM 5% 1/4W
R 0820	1	ERDS2TJ332T	R:FXD CARBON	3.3K OHM 5% 1/4W
R 0821	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0822	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W

P5516A ANALOG BOARD DWG NO 4G206712-1

REF NO	QTY	PARTS NO	DESCRIPTION	
R 0823	1	ERDS2TJ222T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0824	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0825	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0826	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0827	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0828	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0829	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0830	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0831	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0832	1	ERDS2TJ910T	R:FXD CARBON	91 OHM 5% 1/4W
R 0833	1	ERDS2TJ910T	R:FXD CARBON	91 OHM 5% 1/4W
R 0834	1	ERDS2TJ910T	R:FXD CARBON	91 OHM 5% 1/4W
R 0835	1	ERDS2TJ910T	R:FXD CARBON	91 OHM 5% 1/4W
R 0836	1	ERDS2TJ302T	R:FXD CARBON	3K OHM 5% 1/4W
R 0837	1	ERDS2TJ302T	R:FXD CARBON	3K OHM 5% 1/4W
R 0838	1	ERDS2TJ302T	R:FXD CARBON	3K OHM 5% 1/4W
R 0839	1	ERDS2TJ302T	R:FXD CARBON	3K OHM 5% 1/4W
R 0840	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 0841	1	ERDS2TJ683T	R:FXD CARBON	68K OHM 5% 1/4W
R 0842	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 0843	1	ERDS2TJ124T	R:FXD CARBON	120K OHM 5% 1/4W
R 0844	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 0845	1	ERDS2TJ683T	R:FXD CARBON	68K OHM 5% 1/4W
R 0846	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 0847	1	ERDS2TJ393T	R:FXD CARBON	39K OHM 5% 1/4W
R 0849	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 0850	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 0851	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 0852	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 0855	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0860	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 0861	1	ERDS2TJ683T	R:FXD CARBON	68K OHM 5% 1/4W
R 0862	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 0863	1	ERDS2TJ124T	R:FXD CARBON	120K OHM 5% 1/4W
R 0864	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 0865	1	ERDS2TJ683T	R:FXD CARBON	68K OHM 5% 1/4W
R 0866	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 0867	1	ERDS2TJ393T	R:FXD CARBON	39K OHM 5% 1/4W
R 0869	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 0870	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 0871	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 0872	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W

P5516A ANALOG BOARD DWG NO 4G206712-1

REF NO	QTY	PARTS NO	DESCRIPTION	
R 0880	1	ERDS2TJ182T	R:FXD CARBON	1.8K OHM 5% 1/4W
R 0882	1	ERDS2TJ182T	R:FXD CARBON	1.8K OHM 5% 1/4W
R 1100	1	EROS2TKF75R0	R:FXD MET FLM	75.0 OHM 1% 1/4W
R 1101	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 1102	1	ERDS2TJ622T	R:FXD CARBON	6.2K OHM 5% 1/4W
R 1103	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 1104	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 1105	1	ERDS2TJ122T	R:FXD CARBON	1.2K OHM 5% 1/4W
R 1106	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 1107	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1108	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 1109	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 1110	1	ERDS2TJ122T	R:FXD CARBON	1.2K OHM 5% 1/4W
R 1111	1	ERDS2TJ122T	R:FXD CARBON	1.2K OHM 5% 1/4W
R 1112	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 1113	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 1114	1	EROS2TKF1002	R:FXD MET FLM	10.0K OHM 1% 1/4W
R 1115	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 1116	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 1117	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 1119	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1120	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1121	1	ERDS2TJ152T	R:FXD CARBON	1.5K OHM 5% 1/4W
R 1122	1	ERDS2TJ332T	R:FXD CARBON	3.3K OHM 5% 1/4W
R 1123	1	ERDS2TJ153T	R:FXD CARBON	15K OHM 5% 1/4W
R 1124	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1125	1	ERDS2TJ333T	R:FXD CARBON	33K OHM 5% 1/4W
R 1126	1	ERDS2TJ563T	R:FXD CARBON	56K OHM 5% 1/4W
R 1127	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1128	1	EROS2TKF1001	R:FXD MET FLM	1K OHM 1% 1/4W
R 1129	1	EROS2TKF6490	R:FXD MET FLM	649 OHM 1% 1/4W
R 1130	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1131	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1132	1	ERDS2TJ682T	R:FXD CARBON	6.8K OHM 5% 1/4W
R 1133	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1135	1	EROS2TKF8061	R:FXD MET FLM	8.06K OHM 1% 1/4W
R 1140	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 1141	1	ERDS2TJ131T	R:FXD CARBON	130 OHM 5% 1/4W
R 1142	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 1143	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 1146	1	ERDS2TJ391T	R:FXD CARBON	390 OHM 5% 1/4W
R 1165	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W

P5516A ANALOG BOARD DWG NO 4G206712-1

REF NO	QTY	PARTS NO	DESCRIPTION	
R 1166	1	ERDS2TJ821T	R:FXD CARBON	820 OHM 5% 1/4W
R 1167	1	ERDS2TJ821T	R:FXD CARBON	820 OHM 5% 1/4W
R 1169	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 1170	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 1171	1	ERDS2TJ331T	R:FXD CARBON	330 OHM 5% 1/4W
R 1172	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1173	1	ERDS2TJ332T	R:FXD CARBON	3.3K OHM 5% 1/4W
R 1174	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1175	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1176	1	ERDS2TJ681T	R:FXD CARBON	680 OHM 5% 1/4W
R 1177	1	ERDS2TJ681T	R:FXD CARBON	680 OHM 5% 1/4W
R 1178	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 1186	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 1187	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 1188	1	ERDS2TJ474T	R:FXD CARBON	470K OHM 5% 1/4W
R 1189	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 1190	1	PK502H502H0	R:VAR CERMET	5K OHM +-20% 1/2W
R 1191	1	ERDS2TJ474T	R:FXD CARBON	470K OHM 5% 1/4W
R 1192	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 1193	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 1194	1	ERDS2TJ224T	R:FXD CARBON	220K OHM 5% 1/4W
R 1195	1	ERDS2TJ224T	R:FXD CARBON	220K OHM 5% 1/4W
R 1196	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1197	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1201	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 1202	1	ERDS2TJ622T	R:FXD CARBON	6.2K OHM 5% 1/4W
R 1203	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 1204	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 1205	1	ERDS2TJ122T	R:FXD CARBON	1.2K OHM 5% 1/4W
R 1206	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 1207	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1208	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 1209	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 1210	1	ERDS2TJ122T	R:FXD CARBON	1.2K OHM 5% 1/4W
R 1211	1	ERDS2TJ122T	R:FXD CARBON	1.2K OHM 5% 1/4W
R 1212	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 1213	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 1214	1	EROS2TKF1002	R:FXD MET FLM	10.0K OHM 1% 1/4W
R 1216	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 1217	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 1225	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 1228	1	EROS2TKF8061	R:FXD MET FLM	8.06K OHM 1% 1/4W

P5516A ANALOG BOARD DWG NO 4G206712-1

REF NO	QTY	PARTS NO	DESCRIPTION	
R 1229	1	EROS2TKF6040	R:FXD MET FLM	604 OHM 1% 1/4W
R 1230	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1231	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1240	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 1241	1	ERDS2TJ131T	R:FXD CARBON	130 OHM 5% 1/4W
R 1242	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 1243	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 1246	1	ERDS2TJ391T	R:FXD CARBON	390 OHM 5% 1/4W
R 1255	1	ERDS2TJ182T	R:FXD CARBON	1.8K OHM 5% 1/4W
R 1265	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 1266	1	ERDS2TJ821T	R:FXD CARBON	820 OHM 5% 1/4W
R 1267	1	ERDS2TJ821T	R:FXD CARBON	820 OHM 5% 1/4W
R 1270	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 1271	1	ERDS2TJ331T	R:FXD CARBON	330 OHM 5% 1/4W
R 1272	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1273	1	ERDS2TJ332T	R:FXD CARBON	3.3K OHM 5% 1/4W
R 1274	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1275	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1276	1	ERDS2TJ681T	R:FXD CARBON	680 OHM 5% 1/4W
R 1277	1	ERDS2TJ681T	R:FXD CARBON	680 OHM 5% 1/4W
R 1278	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 1300	1	ERDS2TJ152T	R:FXD CARBON	1.5K OHM 5% 1/4W
R 1301	1	ERDS2TJ152T	R:FXD CARBON	1.5K OHM 5% 1/4W
R 1302	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1303	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1304	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1307	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 1310	1	ERDS2TJ681T	R:FXD CARBON	680 OHM 5% 1/4W
R 1311	1	ERDS2TJ681T	R:FXD CARBON	680 OHM 5% 1/4W
R 1312	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1313	1	ERDS2TJ561T	R:FXD CARBON	560 OHM 5% 1/4W
R 1314	1	ERDS2TJ122T	R:FXD CARBON	1.2K OHM 5% 1/4W
R 1315	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1316	1	ERDS2TJ181T	R:FXD CARBON	180 OHM 5% 1/4W
R 1317	1	ERDS2TJ391T	R:FXD CARBON	390 OHM 5% 1/4W
R 1318	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1319	1	ERDS2TJ561T	R:FXD CARBON	560 OHM 5% 1/4W
R 1320	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 1321	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1322	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1323	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 1325	1	ERDS2TJ681T	R:FXD CARBON	680 OHM 5% 1/4W

P5516A ANALOG BOARD DWG NO 4G206712-1

REF NO	QTY	PARTS NO	DESCRIPTION	
R 1326	1	ERDS2TJ681T	R:FXD CARBON	680 OHM 5% 1/4W
R 1327	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 1328	1	ERDS2TJ152T	R:FXD CARBON	1.5K OHM 5% 1/4W
R 1329	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 1330	1	ERDS2TJ123T	R:FXD CARBON	12K OHM 5% 1/4W
R 1331	1	ERDS2TJ182T	R:FXD CARBON	1.8K OHM 5% 1/4W
R 1332	1	ERDS2TJ473T	R:FXD CARBON	47K OHM 5% 1/4W
R 1333	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 1334	1	ERDS2TJ203T	R:FXD CARBON	20K OHM 5% 1/4W
R 1335	1	ERDS2TJ4R7T	R:FXD CARBON	4.7 OHM 5% 1/4W
R 1336	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1337	1	ERDS2TJ272T	R:FXD CARBON	2.7K OHM 5% 1/4W
R 1338	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1339	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1340	1	ERDS2TJ183T	R:FXD CARBON	18K OHM 5% 1/4W
R 1341	1	ERDS2TJ183T	R:FXD CARBON	18K OHM 5% 1/4W
R 1342	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 1343	1	ERDS2TJ683T	R:FXD CARBON	68K OHM 5% 1/4W
R 1344	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 1345	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 1346	1	ERDS2TJ681T	R:FXD CARBON	680 OHM 5% 1/4W
R 1347	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1348	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 1349	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W
R 1350	1	ERDS2TJ561T	R:FXD CARBON	560 OHM 5% 1/4W
R 1353	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 1354	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1355	1	ERDS2TJ392T	R:FXD CARBON	3.9K OHM 5% 1/4W
R 1356	1	ERDS2TJ152T	R:FXD CARBON	1.5K OHM 5% 1/4W
R 1357	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 1360	1	ERDS2TJ220T	R:FXD CARBON	22 OHM 5% 1/4W
R 1361	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 1363	1	EROS2TKF6811	R:FXD MET FLM	6.81K OHM 1% 1/4W
R 1364	1	EROS2TKF1002	R:FXD MET FLM	10.0K OHM 1% 1/4W
R 1365	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1367	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 1368	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1369	1	EROS2TKF4991	R:FXD MET FLM	4.99K OHM 1% 1/4W
R 1370	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 1371	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 1372	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 1375	1	ERDS2TJ223T	R:FXD CARBON	22K OHM 5% 1/4W

P5516A ANALOG BOARD DWG NO 4G206712-1

REF NO	QTY	PARTS NO	DESCRIPTION	
R 1402	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 1404	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1410	1	ERDS2TJ681T	R:FXD CARBON	680 OHM 5% 1/4W
R 1412	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1416	1	ERDS2TJ181T	R:FXD CARBON	180 OHM 5% 1/4W
R 1418	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1420	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 1422	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 1424	1	ERDS2TJ821T	R:FXD CARBON	820 OHM 5% 1/4W
R 1425	1	ERDS2TJ681T	R:FXD CARBON	680 OHM 5% 1/4W
R 1426	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1427	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1428	1	ERDS2TJ152T	R:FXD CARBON	1.5K OHM 5% 1/4W
R 1429	1	ERDS2TJ152T	R:FXD CARBON	1.5K OHM 5% 1/4W
R 1430	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1431	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 1432	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1433	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 1434	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 1435	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1436	1	ERDS2TJ183T	R:FXD CARBON	18K OHM 5% 1/4W
R 1437	1	ERDS2TJ183T	R:FXD CARBON	18K OHM 5% 1/4W
R 1438	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1439	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 1440	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1441	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 1442	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W
R 1443	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1444	1	ERDS2TJ392T	R:FXD CARBON	3.9K OHM 5% 1/4W
R 1445	1	ERDS2TJ561T	R:FXD CARBON	560 OHM 5% 1/4W
R 1446	1	ERDS2TJ152T	R:FXD CARBON	1.5K OHM 5% 1/4W
R 1447	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 1448	1	ERDS2TJ332T	R:FXD CARBON	3.3K OHM 5% 1/4W
R 1449	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1450	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 1451	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1452	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 1453	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 1455	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 1456	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 1457	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 1458	1	ERDS2TJ220T	R:FXD CARBON	22 OHM 5% 1/4W

P5516A ANALOG BOARD DWG NO 4G206712-1

REF NO	QTY	PARTS NO	DESCRIPTION	
R 1459	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 1460	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1461	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1462	1	ERDS2TJ681T	R:FXD CARBON	680 OHM 5% 1/4W
R 1463	1	EROS2TKF6811	R:FXD MET FLM	6.81K OHM 1% 1/4W
R 1464	1	EROS2TKF1002	R:FXD MET FLM	10.0K OHM 1% 1/4W
R 1465	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1466	1	EROS2TKF4991	R:FXD MET FLM	4.99K OHM 1% 1/4W
R 1467	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1468	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 1469	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 1470	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1475	1	ERDS2TJ223T	R:FXD CARBON	22K OHM 5% 1/4W
R 1480	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 1481	1	ERDS2TJ152T	R:FXD CARBON	1.5K OHM 5% 1/4W
R 1482	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 1483	1	ERDS2TJ133T	R:FXD CARBON	13K OHM 5% 1/4W
R 1485	1	EXBLD8103G	R:NETWORK	10K OHM X4 +-5% 1/8W
R 1487	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 1488	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 1489	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 1490	1	EROS2TKF5231	R:FXD MET FLM	5.23K OHM 1% 1/4W
R 1491	1	PK502H101H0	R:VAR CERMET	100 OHM +-20% 1/2W
R 1492	1	EROS2TKF5231	R:FXD MET FLM	5.23K OHM 1% 1/4W
R 1493	1	PK502H501H0	R:VAR CERMET	500 OHM +-20% 1/2W
R 1494	1	EROS2TKF1001	R:FXD MET FLM	1K OHM 1% 1/4W
R 1495	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 1496	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1497	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 1498	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 1499	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 1501	1	ERDS2TJ473T	R:FXD CARBON	47K OHM 5% 1/4W
R 1502	1	ERDS2TJ473T	R:FXD CARBON	47K OHM 5% 1/4W
R 1503	1	ERDS2TJ473T	R:FXD CARBON	47K OHM 5% 1/4W
R 1504	1	EROS2CHD1003	R:FXD MET FLM	100K OHM 0.5% 1/4W
R 1505	1	EROS2CHD2493	R:FXD MET FLM	249K OHM 0.5% 1/4W
R 1506	1	EROS2CHD1001	R:FXD MET FLM	1.00K OHM 0.5% 1/4W
R 1507	1	EROS2CHD1073	R:FXD MET FLM	107K OHM 0.5% 1/4W
R 1508	1	EROS2CHD3923	R:FXD MET FLM	392K OHM 0.5% 1/4W
R 1509	1	EROS2CHD2003	R:FXD MET FLM	200K OHM 0.5% 1/4W
R 1515	1	EROS2CHD6811	R:FXD MET FLM	6.81K OHM 0.5% 1/4W
R 1516	1	ERDS2TJ474T	R:FXD CARBON	470K OHM 5% 1/4W

P5516A ANALOG BOARD DWG NO 4G206712-1

REF NO	QTY	PARTS NO	DESCRIPTION	
R 1517	1	ERDS2TJ224T	R:FXD CARBON	220K OHM 5% 1/4W
R 1518	1	ERDS2TJ474T	R:FXD CARBON	470K OHM 5% 1/4W
R 1519	1	EROS2CHD6812	R:FXD MET FLM	68.1K OHM 0.5% 1/4W
R 1520	1	ERDS2TJ224T	R:FXD CARBON	220K OHM 5% 1/4W
R 1521	1	ERDS2TJ474T	R:FXD CARBON	470K OHM 5% 1/4W
R 1522	1	ERDS2TJ224T	R:FXD CARBON	220K OHM 5% 1/4W
R 1523	1	EROS2CHD3483	R:FXD MET FLM	348K OHM 0.5% 1/4W
R 1524	1	EROS2CHD3323	R:FXD MET FLM	332K OHM 0.5% 1/4W
R 1525	1	ERDS2TJ474T	R:FXD CARBON	470K OHM 5% 1/4W
R 1526	1	ERDS2TJ224T	R:FXD CARBON	220K OHM 5% 1/4W
R 1527	1	HMGL146814F	R:FXD MET GRZ	6.8M OHM 0.5% 1/4W
R 1528	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 1529	1	ERDS2TJ4R7T	R:FXD CARBON	4.7 OHM 5% 1/4W
R 1530	1	ERDS2TJ4R7T	R:FXD CARBON	4.7 OHM 5% 1/4W
R 1531	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1535	1	ERDS2TJ473T	R:FXD CARBON	47K OHM 5% 1/4W
R 1536	1	ERDS2TJ473T	R:FXD CARBON	47K OHM 5% 1/4W
R 1537	1	ERDS2TJ473T	R:FXD CARBON	47K OHM 5% 1/4W
R 1538	1	EROS2CHD1003	R:FXD MET FLM	100K OHM 0.5% 1/4W
R 1539	1	EROS2CHD2493	R:FXD MET FLM	249K OHM 0.5% 1/4W
R 1540	1	EROS2CHD1001	R:FXD MET FLM	1.00K OHM 0.5% 1/4W
R 1541	1	EROS2CHD1073	R:FXD MET FLM	107K OHM 0.5% 1/4W
R 1542	1	EROS2CHD3923	R:FXD MET FLM	392K OHM 0.5% 1/4W
R 1543	1	EROS2CHD6811	R:FXD MET FLM	6.81K OHM 0.5% 1/4W
R 1544	1	ERDS2TJ474T	R:FXD CARBON	470K OHM 5% 1/4W
R 1545	1	ERDS2TJ224T	R:FXD CARBON	220K OHM 5% 1/4W
R 1546	1	ERDS2TJ474T	R:FXD CARBON	470K OHM 5% 1/4W
R 1547	1	ERDS2TJ224T	R:FXD CARBON	220K OHM 5% 1/4W
R 1548	1	EROS2CHD6812	R:FXD MET FLM	68.1K OHM 0.5% 1/4W
R 1549	1	ERDS2TJ474T	R:FXD CARBON	470K OHM 5% 1/4W
R 1550	1	ERDS2TJ224T	R:FXD CARBON	220K OHM 5% 1/4W
R 1551	1	EROS2CHD3483	R:FXD MET FLM	348K OHM 0.5% 1/4W
R 1552	1	EROS2CHD3323	R:FXD MET FLM	332K OHM 0.5% 1/4W
R 1553	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 1560	1	ERDS2TJ4R7T	R:FXD CARBON	4.7 OHM 5% 1/4W
R 1561	1	EROS2TKF1913	R:FXD MET FLM	191K OHM 1% 1/4W
R 1562	1	PK502H203H0	R:VAR CERMET	
R 2410	1	EROS2TKF75R0	R:FXD MET FLM	75.0 OHM 1% 1/4W
R 2411	1	ERDS2TJ220T	R:FXD CARBON	22 OHM 5% 1/4W
R 2412	1	ERDS2TJ331T	R:FXD CARBON	330 OHM 5% 1/4W
R 2413	1	ERDS2TJ331T	R:FXD CARBON	330 OHM 5% 1/4W
R 2414	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W

P5516A ANALOG BOARD DWG NO 4G206712-1

REF NO	QTY	PARTS NO	DESCRIPTION	
R 2415	1	ERDS2TJ680T	R:FXD CARBON	68 OHM 5% 1/4W
R 2416	1	ERDS2TJ220T	R:FXD CARBON	22 OHM 5% 1/4W
R 2420	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 2421	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 2422	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 2423	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 2424	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 2425	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 2426	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W
R 2431	1	ERDS2TJ562T	R:FXD CARBON	5.6K OHM 5% 1/4W
R 2432	1	ERDS2TJ332T	R:FXD CARBON	3.3K OHM 5% 1/4W
R 2433	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 2434	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 2435	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 2436	1	ERDS2TJ220T	R:FXD CARBON	22 OHM 5% 1/4W
R 2437	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 2438	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 2439	1	ERDS2TJ682T	R:FXD CARBON	6.8K OHM 5% 1/4W
R 2451	1	ERDS2TJ332T	R:FXD CARBON	3.3K OHM 5% 1/4W
R 2452	1	ERDS2TJ562T	R:FXD CARBON	5.6K OHM 5% 1/4W
R 2453	1	ERDS2TJ152T	R:FXD CARBON	1.5K OHM 5% 1/4W
R 2456	1	ERDS2TJ682T	R:FXD CARBON	6.8K OHM 5% 1/4W
R 2457	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 2459	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 2460	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 2461	1	ERDS2TJ562T	R:FXD CARBON	5.6K OHM 5% 1/4W
R 2462	1	ERDS2TJ681T	R:FXD CARBON	680 OHM 5% 1/4W
R 2463	1	ERDS2TJ512T	R:FXD CARBON	5.1K OHM 5% 1/4W
R 2464	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 2465	1	ERDS2TJ220T	R:FXD CARBON	22 OHM 5% 1/4W
R 2466	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 2467	1	ERDS2TJ331T	R:FXD CARBON	330 OHM 5% 1/4W
R 2468	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 2469	1	ERDS2TJ331T	R:FXD CARBON	330 OHM 5% 1/4W
R 2471	1	ERDS2TJ680T	R:FXD CARBON	68 OHM 5% 1/4W
R 2474	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 2475	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 2476	1	ERDS2TJ220T	R:FXD CARBON	22 OHM 5% 1/4W
R 2477	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 2478	1	ERDS2TJ682T	R:FXD CARBON	6.8K OHM 5% 1/4W
R 2479	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 2481	1	ERDS2TJ682T	R:FXD CARBON	6.8K OHM 5% 1/4W

P5516A ANALOG BOARD DWG NO 4G206712-1

REF NO	QTY	PARTS NO	DESCRIPTION	
R 2482	1	ERDS2TJ220T	R:FXD CARBON	22 OHM 5% 1/4W
R 2484	1	ERDS2TJ562T	R:FXD CARBON	5.6K OHM 5% 1/4W
U 0040	1	AN1081	IC:OP AMP	SINGLE J-FET
U 0090	1	AN1082	IC:OP AMP	DUAL J-FET
U 0100	1	AN1082	IC:OP AMP	DUAL J-FET
U 0140	1	AN1081	IC:OP AMP	SINGLE J-FET
U 0190	1	AN1082	IC:OP AMP	DUAL J-FET
U 0200	1	AN1082	IC:OP AMP	DUAL J-FET
U 0440	1	AN1081	IC:OP AMP	SINGLE J-FET
U 0680	1	AN1081	IC:OP AMP	SINGLE J-FET
U 0740	1	AN1081	IC:OP AMP	SINGLE J-FET
U 0800	1	TC74HC595P	IC:C MOS	8BIT SHIF REG LATCH
U 0801	1	TC74HC595P	IC:C MOS	8BIT SHIF REG LATCH
U 0802	1	74HC595	IC:HS-CMOS	8-BIT SHIFT REG./LATCH
U 0803	1	74HC164	IC:HS-CMOS	8BIT SHIFT REGISTER SIPO
U 0804	1	74HC164	IC:HS-CMOS	8BIT SHIFT REGISTER SIPO
U 0806	1	TC40H000P	IC:C MOS	QUAD 2-INPUT NAND GATE
U 0807	1	TC40H000P	IC:C MOS	QUAD 2-INPUT NAND GATE
U 0815	1	TC40H000P	IC:C MOS	QUAD 2-INPUT NAND GATE
U 0816	1	TC40H076P	IC:C MOS	DUAL J-K F/F WITH PR,CLR
U 0817	1	TC40H076P	IC:C MOS	DUAL J-K F/F WITH PR,CLR
U 0820	1	TC40H157P	IC:C MOS	QUAD 2-TO-1 LINE SELECT
U 0821	1	TC40H157P	IC:C MOS	QUAD 2-TO-1 LINE SELECT
U 0822	1	TC40H010P	IC:C MOS	TRIPLE 3-1NPUT NAND GATE
U 0823	1	TC40H010P	IC:C MOS	TRIPLE 3-1NPUT NAND GATE
U 0824	1	UPD4052BC	IC:C MOS	ANALOG MULTIPLEXER
U 0825	1	TC40H174P	IC:C MOS	HEX D-TYPE FLIP-FLOP
U 0833	1	TC74HC158P	IC:C MOS	2 TO 1 DATA SELECTOR
U 0835	1	AN1084	IC:OP AMP	QUAD J-FET
U 0836	1	AN1084	IC:OP AMP	QUAD J-FET
U 1113	1	UPD4052BC	IC:C MOS	ANALOG MULTIPLEXER
U 1120	1	KD0004B		
U 1140	1	UPC1663C	IC:VIDEO AMP	BW 700MHZ
U 1171	1	HD10107	IC:ECL	TRIPLE 2-IN X OR/NOR
U 1186	1	AN1081	IC:OP AMP	SINGLE J-FET
U 1213	1	UPD4052BC	IC:C MOS	ANALOG MULTIPLEXER
U 1217	1	HD10107	IC:ECL	TRIPLE 2-IN X OR/NOR
U 1228	1	74HC164	IC:HS-CMOS	8BIT SHIFT REGISTER SIPO
U 1229	1	74HC164	IC:HS-CMOS	8BIT SHIFT REGISTER SIPO
U 1240	1	UPC1663C	IC:VIDEO AMP	BW 700MHZ
U 1303	1	HD10131	IC:ECL	DUAL D MASTER-SLAVE F-F
U 1328	1	74HC76	IC:HS-CMOS	DUAL J-K F/F WITH PR,CLR

P5516A ANALOG BOARD DWG NO 4G206712-1

REF NO	QTY	PARTS NO	DESCRIPTION	
U 1330	1	74HC123	IC:HS-CMOS	DUAL RETRIGG MONO MU
U 1333	1	74HC02	IC:HS-CMOS	QUAD 2-NOR
U 1340	1	74HC109	IC:HS-CMOS	DUAL J-K F/F (PR,CLR)
U 1341	1	74HC00	IC:HS-CMOS	QUAD 2-NAND
U 1368	1	TC40H000P	IC:C MOS	QUAD 2-INPUT NAND GATE
U 1404	1	HD10131	IC:ECL	DUAL D MASTER-SLAVE F-F
U 1430	1	74HC02	IC:HS-CMOS	QUAD 2-NOR
U 1467	1	74HC00	IC:HS-CMOS	QUAD 2-NAND
U 1480	1	74HC4040C	IC:HS-CMOS	12STAGE BINARY COUNTER U
U 1482	1	AN1081	IC:OP AMP	SINGLE J-FET
U 1483	1	74HC00	IC:HS-CMOS	QUAD 2-NAND
U 1498	1	74HC595	IC:HS-CMOS	8-BIT SHIFT REG./LATCH
U 1499	1	74HC595	IC:HS-CMOS	8-BIT SHIFT REG./LATCH
U 1501	1	MN6631A	IC:C MOS	ANALOG SWICH
U 1509	1	AN1081	IC:OP AMP	SINGLE J-FET
U 1517	1	AN1084	IC:OP AMP	QUAD J-FET
U 1527	1	AN90B22	TSTR ARRAYS NPN	50V 25MA
U 1528	1	TC74HC595P	IC:C MOS	8BIT SHIF REG LATCH
U 1529	1	TC74HC595P	IC:C MOS	8BIT SHIF REG LATCH
U 1530	1	TC74HC595P	IC:C MOS	8BIT SHIF REG LATCH
U 1542	1	AN1084	IC:OP AMP	QUAD J-FET
U 1555	1	TC74HC595P	IC:C MOS	8BIT SHIF REG LATCH

P5516A MAIN BOARD DWG NO 4G206713-1

REF NO	QTY	PARTS NO	DESCRIPTION	
C 0003	1	ECCF1H330KC	C:FXD CER TC	33PF +-10% 50V NPO
C 0004	1	ECCF1H330KC	C:FXD CER TC	33PF +-10% 50V NPO
C 0080	1	ECV1ZW10X65	C:VAR CER	12PF-2.8PF 250V
C 0081	1	ECV1ZW10X65	C:VAR CER	12PF-2.8PF 250V
C 0082	1	ECCF1H180KC	C:FXD CER TC	18PF +-10% 50V NPO
C 0083	1	ECV1ZW10X65	C:VAR CER	12PF-2.8PF 250V
C 0085	1	ECCF1H270KC	C:FXD CER TC	27PF +-10% 50V NPO
C 0086	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 0090	1	ECV1ZW10X65	C:VAR CER	12PF-2.8PF 250V
C 0091	1	ECV1ZW10X65	C:VAR CER	12PF-2.8PF 250V
C 0092	1	ECCF1H180KC	C:FXD CER TC	18PF +-10% 50V NPO
C 0093	1	ECV1ZW10X65	C:VAR CER	12PF-2.8PF 250V
C 0095	1	ECCF1H270KC	C:FXD CER TC	27PF +-10% 50V NPO
C 0096	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 0302	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0303	1	ECKR2H102MD	C:FXD CER HI-K	1000PF +-20% 500V
C 0304	1	ECCR2H010CC	C:FXD CER TC	1PF +-0.25PF 500V NPO
C 0307	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0311	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0314	1	ECKF1H681KB	C:FXD CER HI-K	680PF +-10% 50V
C 0315	1	ECCR1H220K	C:FXD CER TC	22PF +-10% 50V SL
C 0320	1	ECKF1H103ZF	C:FXD CER HI-K	10000PF +80-20% 50V
C 0335	1	ECKF1H103ZF	C:FXD CER HI-K	10000PF +80-20% 50V
C 0336	1	ECV1ZW20X65	C:VAR CER	20.5PF-3.3PF 250V
C 0340	1	ECEA1CKS470E	C:FXD AL ELECT	47UF +-20% 16V
C 0341	1	ECEA1CKS470E	C:FXD AL ELECT	47UF +-20% 16V
C 0352	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0353	1	ECKR2H102MD	C:FXD CER HI-K	1000PF +-20% 500V
C 0354	1	ECCR2H010CC	C:FXD CER TC	1PF +-0.25PF 500V NPO
C 0357	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0361	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0364	1	ECKF1H681KB	C:FXD CER HI-K	680PF +-10% 50V
C 0365	1	ECCR1H220K	C:FXD CER TC	22PF +-10% 50V SL
C 0370	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0385	1	ECKF1H103ZF	C:FXD CER HI-K	10000PF +80-20% 50V
C 0386	1	ECV1ZW20X65	C:VAR CER	20.5PF-3.3PF 250V
C 0388	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0389	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0390	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0391	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 2269	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 2270	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V

P5516A MAIN BOARD DWG NO 4G206713-1

REF NO	QTY	PARTS NO	DESCRIPTION	
C 2271	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 2280	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 2281	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 2282	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 2283	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 2284	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 2355	1	ECKF1H102KB	C:FXD CER HI-K	1000PF +-10% 50V
CR 0303	1	1S1544A	DIODE:SI	100MA 30V
CR 0310	1	MA165TA	DIODE	75V 100MA
CR 0353	1	1S1544A	DIODE:SI	100MA 30V
CR 0360	1	MA165TA	DIODE	75V 100MA
CR 2215	1	LN48YP	LED	AMBER
CR 2242	1	LN38GP	LED	GREEN
CR 2243	1	LN48YP	LED	AMBER
CR 2244	1	LN48YP	LED	AMBER
CR 2245	1	LN48YP	LED	AMBER
CR 2246	1	LN48YP	LED	AMBER
CR 2247	1	LN48YP	LED	AMBER
CR 2248	1	LN48YP	LED	AMBER
CR 2249	1	LN48YP	LED	AMBER
CR 2250	1	LN48YP	LED	AMBER
CR 2251	1	LN48YP	LED	AMBER
CR 2252	1	LN48YP	LED	AMBER
CR 2253	1	LN48YP	LED	AMBER
CR 2254	1	LN48YP	LED	AMBER
CR 2255	1	LN48YP	LED	AMBER
CR 2256	1	LN48YP	LED	AMBER
CR 2257	1	LN48YP	LED	AMBER
CR 2258	1	LN48YP	LED	AMBER
CR 2259	1	LN48YP	LED	AMBER
CR 2260	1	LN48YP	LED	AMBER
CR 2261	1	LN48YP	LED	AMBER
CR 2262	1	LN48YP	LED	AMBER
CR 2263	1	LN48YP	LED	AMBER
CR 2268	1	LN48YP	LED	AMBER
CR 2269	1	LN48YP	LED	AMBER
CR 2270	1	LN48YP	LED	AMBER
CR 2271	1	LN48YP	LED	AMBER
CR 2272	1	LN48YP	LED	AMBER
CR 2273	1	LN48YP	LED	AMBER
CR 2274	1	LN48YP	LED	AMBER
CR 2275	1	LN48YP	LED	AMBER

P5516A MAIN BOARD DWG NO 4G206713-1

REF NO	QTY	PARTS NO	DESCRIPTION	
CR 2276	1	LN48YP	LED	AMBER
CR 2277	1	LN48YP	LED	AMBER
CR 2278	1	LN48YP	LED	AMBER
CR 2279	1	LN48YP	LED	AMBER
CR 2280	1	LN48YP	LED	AMBER
CR 2281	1	LN48YP	LED	AMBER
CR 2282	1	LN48YP	LED	AMBER
CR 2283	1	LN48YP	LED	AMBER
CR 2284	1	LN48YP	LED	AMBER
CR 2285	1	LN48YP	LED	AMBER
CR 2286	1	LN48YP	LED	AMBER
CR 2287	1	LN48YP	LED	AMBER
CR 2288	1	LN48YP	LED	AMBER
CR 2289	1	LN48YP	LED	AMBER
CR 2290	1	LN48YP	LED	AMBER
CR 2291	1	LN48YP	LED	AMBER
CR 2292	1	LN48YP	LED	AMBER
CR 2293	1	LN48YP	LED	AMBER
CR 2294	1	LN48YP	LED	AMBER
CR 2295	1	LN48YP	LED	AMBER
CR 2296	1	LN48YP	LED	AMBER
CR 2297	1	LN48YP	LED	AMBER
CR 2298	1	LN48YP	LED	AMBER
CR 2299	1	LN48YP	LED	AMBER
E 0010	1	1G401421-2	PCB,PANEL	P5516A
J	6	001P1100	CONNECTOR:PIN	
J	1	76J019	CRT SOCKET	
J 0133	1	163683-1	CONNECTOR:PIN	CIS 3P 2.5PITCH
J 1050	1	65524-204	CONNECTOR	4P ANGLE TYPE
J 1080	1	65524-204	CONNECTOR	4P ANGLE TYPE
J 1301	1	EMCS1052M	CONNECTOR	10P STRAIGHT
J 1311	1	SLP16R-2	CONNECTOR:PIN	16P
J 1321	1	EMCS0352M	CONNECTOR:PIN	3P STRAIGHT
J 1351	1	SLP16R-2	CONNECTOR:PIN	16P
J 1361	1	SLP16R-2	CONNECTOR:PIN	16P
J 1700	1	SLP16S-2	CONNECTOR:PIN	16P
J 1701	1	SLP16S-2	CONNECTOR:PIN	16P
J 1710	1	SLP16S-2	CONNECTOR:PIN	16P
J 1711	1	SLP16S-2	CONNECTOR:PIN	16P
J 1720	1	SLP16S-2	CONNECTOR:PIN	16P
J 1721	1	SLP16S-2	CONNECTOR:PIN	16P

P5516A MAIN BOARD DWG NO 4G206713-1

REF NO	QTY	PARTS NO	DESCRIPTION	
J 1730	1	SLP16S-2	CONNECTOR:PIN	16P
J 1731	1	SLP16S-2	CONNECTOR:PIN	16P
J 1740	1	EMCS0251ML	CONNECTOR:PIN	2PIN RIGHT ANGLE
J 1741	1	EMCS0252M	CONNECTOR PIN	2P STRAIGHT
MP	1	4G617084-0WB	HOLDER:LAMP	P5512A
MP	1	4G618421-0C	SUPPORT:TRMNL	P5516A CAL
MP	1	4G618422-0WB	BRACKET:CAL	P5516A
MP	2	4G644652-0AB	SPACER	M2.5-12.2X0.45MM
P 0131	1	4G471169-2	CABLE(B)	P5516A
P 0135	1	4G471169-2	CABLE(B)	P5516A
P 0136	1	4G471169-2	CABLE(B)	P5516A
P 0161	1	EMCM0250D65	CONNECTOR	2P L=500MM
P 0170	1	4G471168-2	CABLE(C)	P5516A
P 0171	1	4G471168-2	CABLE(C)	P5516A
P 0172	1	4G471168 2	CABLE(C)	P5516A
P 0173	1	4G471168-2	CABLE(C)	P5516A
P 1801	1	1-480283-0	CONNECTOR	MATE-N-LOK 8P PLUG
Q 0300	1	2SK192A-GR	TSTR:FET	PC:200MW
Q 0301	1	2SC1215TA	TSTR:SI NPN	PC:200MW FT:1200MHZ
Q 0310	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0320	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0321	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0330	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 0331	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 0350	1	2SK192A-GR	TSTR:FET	PC:200MW
Q 0351	1	2SC1215TA	TSTR:SI NPN	PC:200MW FT:1200MHZ
Q 0360	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0370	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0371	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0380	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 0381	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 2267	1	2SC3811-RS	TCSTR SI NPN	400MW FT 450MHZ
Q 2296	1	2SC3811-RS	TCSTR SI NPN	400MW FT 450MHZ
Q 2297	1	2SC3811-RS	TCSTR SI NPN	400MW FT 450MHZ
R 0003	1	ERDS2TJ330T	R:FXD CARBON	33 OHM 5% 1/4W
R 0004	1	ERDS2TJ330T	R:FXD CARBON	33 OHM 5% 1/4W
R 0080	1	ERDS2TJ220T	R:FXD CARBON	22 OHM 5% 1/4W
R 0081	1	ERDS2TJ220T	R:FXD CARBON	22 OHM 5% 1/4W
R 0082	1	ERDS2TJ330T	R:FXD CARBON	33 OHM 5% 1/4W
R 0083	1	EROS1TKF8003	R:FXD MET FLM	800K OHM 1% 1/2W
R 0084	1	EROS1TKF2503	R:FXD MET FLM	250K OHM 1% 1/2W

P5516A MAIN BOARD DWG NO 4G206713-1

REF NO	QTY	PARTS NO	DESCRIPTION	
R 0085	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0086	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 0090	1	ERDS2TJ220T	R:FXD CARBON	22 OHM 5% 1/4W
R 0091	1	ERDS2TJ220T	R:FXD CARBON	22 OHM 5% 1/4W
R 0092	1	ERDS2TJ330T	R:FXD CARBON	33 OHM 5% 1/4W
R 0093	1	EROS1TKF8003	R:FXD MET FLM	800K OHM 1% 1/2W
R 0094	1	EROS1TKF2503	R:FXD MET FLM	250K OHM 1% 1/2W
R 0095	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0096	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 0300	1	ERDS2TJ150T	R:FXD CARBON	15 OHM 5% 1/4W
R 0301	1	EROS1TKF5003	R:FXD MET FLM	500K OHM 1% 1/2W
R 0302	1	EROS1TKF5003	R:FXD MET FLM	500K OHM 1% 1/2W
R 0303	1	EROS1TKF1003	R:FXD MET FLM	100K OHM 1% 1/2W
R 0304	1	ERDS2TJ682T	R:FXD CARBON	6.8K OHM 5% 1/4W
R 0305	1	ERDS2TJ220T	R:FXD CARBON	22 OHM 5% 1/4W
R 0306	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 0307	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 0308	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 0310	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0311	1	ERDS1TJ102T	R:FXD CARBON	1K OHM 5% 1/2W
R 0312	1	EROS2TKF4993	R:FXD MET FLM	499K OHM 1% 1/4W
R 0313	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W
R 0314	1	EROS2TKF4993	R:FXD MET FLM	499K OHM 1% 1/4W
R 0315	1	EROS2TKF1500	R:FXD MET FLM	150 OHM 1% 1/4W
R 0320	1	ERDS2TJ362T	R:FXD CARBON	3.6K OHM 5% 1/4W
R 0321	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W
R 0322	1	ERDS2TJ561T	R:FXD CARBON	560 OHM 5% 1/4W
R 0323	1	PK502H101H0	R:VAR CERMET	100 OHM +-20% 1/2W
R 0324	1	ERDS2TJ112T	R:FXD CARBON	1.1K OHM 5% 1/4W
R 0325	1	ERDS2TJ112T	R:FXD CARBON	1.1K OHM 5% 1/4W
R 0326	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 0327	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 0330	1	EROS2TKF3480	R:FXD MET FLM	348 OHM 1% 1/4W
R 0331	1	EROS2TKF3480	R:FXD MET FLM	348 OHM 1% 1/4W
R 0332	1	EROS2TKF5621	R:FXD MET FLM	5.62K OHM 1% 1/4W
R 0333	1	EROS2TKF3921	R:FXD MET FLM	3.92K OHM 1% 1/4W
R 0335	1	EVHZ50F15B14	R:VAR CARBON	10K OHM 20% 0.2W
R 0336	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 0338	1	ERDS2TJ393T	R:FXD CARBON	39K OHM 5% 1/4W
R 0339	1	ERDS2TJ393T	R:FXD CARBON	39K OHM 5% 1/4W
R 0340	1	ERDS2TJ6R8T	R:FXD CARBON	6.8 OHM 5% 1/4W
R 0341	1	ERDS2TJ6R8T	R:FXD CARBON	6.8 OHM 5% 1/4W

P5516A MAIN BOARD DWG NO 4G206713-1

REF NO	QTY	PARTS NO	DESCRIPTION	
R 0350	1	ERDS2TJ150T	R:FXD CARBON	15 OHM 5% 1/4W
R 0351	1	EROS1TKF5003	R:FXD MET FLM	500K OHM 1% 1/2W
R 0352	1	EROS1TKF5003	R:FXD MET FLM	500K OHM 1% 1/2W
R 0353	1	EROS1TKF1003	R:FXD MET FLM	100K OHM 1% 1/2W
R 0354	1	ERDS2TJ682T	R:FXD CARBON	6.8K OHM 5% 1/4W
R 0355	1	ERDS2TJ220T	R:FXD CARBON	22 OHM 5% 1/4W
R 0356	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 0357	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 0358	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 0360	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0361	1	ERDS1TJ102T	R:FXD CARBON	1K OHM 5% 1/2W
R 0362	1	EROS2TKF4993	R:FXD MET FLM	499K OHM 1% 1/4W
R 0363	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W
R 0364	1	EROS2TKF4993	R:FXD MET FLM	499K OHM 1% 1/4W
R 0365	1	EROS2TKF1500	R:FXD MET FLM	150 OHM 1% 1/4W
R 0370	1	ERDS2TJ362T	R:FXD CARBON	3.6K OHM 5% 1/4W
R 0371	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W
R 0372	1	ERDS2TJ561T	R:FXD CARBON	560 OHM 5% 1/4W
R 0373	1	PK502H101H0	R:VAR CERMET	100 OHM +-20% 1/2W
R 0374	1	ERDS2TJ112T	R:FXD CARBON	1.1K OHM 5% 1/4W
R 0375	1	ERDS2TJ112T	R:FXD CARBON	1.1K OHM 5% 1/4W
R 0376	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 0377	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 0380	1	EROS2TKF3480	R:FXD MET FLM	348 OHM 1% 1/4W
R 0381	1	EROS2TKF3480	R:FXD MET FLM	348 OHM 1% 1/4W
R 0382	1	EROS2TKF5621	R:FXD MET FLM	5.62K OHM 1% 1/4W
R 0383	1	EROS2TKF3921	R:FXD MET FLM	3.92K OHM 1% 1/4W
R 0385	1	EVHZ50F15B14	R:VAR CARBON	10K OHM 20% 0.2W
R 0386	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 1805	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 2201	1	EVKK4AF01B14	R:VAR CARBON	10K X2 OHM 20% 1/5W
R 2202	1	EVKK4AF01B14	R:VAR CARBON	10K X2 OHM 20% 1/5W
R 2203	1	EVKK4AF01B14	R:VAR CARBON	10K X2 OHM 20% 1/5W
R 2204	1	EVKK4AF01B14	R:VAR CARBON	10K X2 OHM 20% 1/5W
R 2209	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2210	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2211	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2213	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2214	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2215	1	ERDS2TJ821T	R:FXD CARBON	820 OHM 5% 1/4W
R 2216	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2217	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W

P5516A MAIN BOARD DWG NO 4G206713-1

REF NO	QTY	PARTS NO	DESCRIPTION	
R 2225	1	ERDS2TJ272T	R:FXD CARBON	2.7K OHM 5% 1/4W
R 2227	1	EVHZ36F20B14	R:VAR CARBON	10K OHM 20% 0.2W
R 2229	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 2230	1	EVHRLX513B14	R:VAR CARBON	10K OHM +-20% 0.2W
R 2232	1	EVHZ36008B14	R:VAR CARBON	10KOHM 20% 0.2W
R 2233	1	EVHZ36008B14	R:VAR CARBON	10KOHM 20% 0.2W
R 2236	1	ERDS2TJ332T	R:FXD CARBON	3.3K OHM 5% 1/4W
R 2237	1	EVHZ36008B14	R:VAR CARBON	10KOHM 20% 0.2W
R 2238	1	EVHZ36008B14	R:VAR CARBON	10KOHM 20% 0.2W
R 2239	1	EVHRLX513B14	R:VAR CARBON	10K OHM +-20% 0.2W
R 2240	1	EVHRLX513B14	R:VAR CARBON	10K OHM +-20% 0.2W
R 2241	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 2242	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 2245	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 2245	1	EVQWWS00124B	ROTARY ENCODER	24 PLS
R 2246	1	EVQWWS00124B	ROTARY ENCODER	24 PLS
R 2247	1	EVQWWS00124B	ROTARY ENCODER	24 PLS
R 2256	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 2257	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 2258	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 2259	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 2260	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 2261	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 2262	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 2263	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 2267	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 2268	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 2269	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 2270	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 2271	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 2272	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 2273	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 2274	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 2275	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 2276	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 2277	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 2278	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 2279	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 2280	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 2281	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 2282	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 2283	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W

P5516A MAIN BOARD DWG NO 4G206713-1

REF NO	QTY	PARTS NO	DESCRIPTION	
R 2295	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 2296	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 2297	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 2298	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
S 0080	1	SPUL19	P5516A CH3 ATT SW	DC 30V 0.1A
S 0090	1	SPUL19	P5516A CH3 ATT SW	DC 30V 0.1A
S 2201	1	EVQQSY05T	TOUCH SW	
S 2202	1	EVQQSY05T	TOUCH SW	
S 2203	1	EVQQSY05T	TOUCH SW	
S 2204	1	EVQQSY05T	TOUCH SW	
S 2205	1	EVQQSY05T	TOUCH SW	
S 2206	1	EVQQSY05T	TOUCH SW	
S 2207	1	EVQQSY05T	TOUCH SW	
S 2208	1	EVQQSY05T	TOUCH SW	
S 2209	1	EVQQSY05T	TOUCH SW	
S 2210	1	EVQQSY05T	TOUCH SW	
S 2211	1	EVQQSY05T	TOUCH SW	
S 2212	1	EVQQSY05T	TOUCH SW	
S 2213	1	EVQQSY05T	TOUCH SW	
S 2214	1	EVQQSY05T	TOUCH SW	
S 2215	1	EVQQSY05T	TOUCH SW	
S 2216	1	EVQQSY05T	TOUCH SW	
S 2217	1	EVQQSY05T	TOUCH SW	
S 2218	1	EVQQSY05T	TOUCH SW	
S 2219	1	EVQQSY05T	TOUCH SW	
S 2220	1	EVQQSY05T	TOUCH SW	
S 2221	1	EVQQSY05T	TOUCH SW	
S 2222	1	EVQQSY05T	TOUCH SW	
S 2223	1	EVQQSY05T	TOUCH SW	
S 2224	1	EVQQSY05T	TOUCH SW	
S 2225	1	EVQQSY05T	TOUCH SW	
S 2226	1	EVQQSY05T	TOUCH SW	
S 2227	1	EVQQSY05T	TOUCH SW	
S 2228	1	EVQQSY05T	TOUCH SW	
S 2229	1	EVQQSY05T	TOUCH SW	
S 2230	1	EVQQSY05T	TOUCH SW	
S 2231	1	EVQQSY05T	TOUCH SW	
S 2232	1	EVQQSY05T	TOUCH SW	
S 2233	1	EVQQSY05T	TOUCH SW	
S 2234	1	EVQQSY05T	TOUCH SW	
S 2235	1	EVQQSY05T	TOUCH SW	
S 2236	1	EVQQSY05T	TOUCH SW	

P5516A MAIN BOARD DWG NO 4G206713-1

REF NO	QTY	PARTS NO	DESCRIPTION	
S 2237	1	EVQQSY05T	TOUCH SW	
S 2238	1	EVQQSY05T	TOUCH SW	
S 2239	1	EVQQSY05T	TOUCH SW	
S 2240	1	EVQQSY05T	TOUCH SW	
S 2241	1	EVQQSY05T	TOUCH SW	
S 2250	1	EVQQAH08Q	TOUCH SW	
U 0301	1	AN6583	IC:OP AMP	SINGLE J-FET
U 0351	1	AN6583	IC:OP AMP	SINGLE J-FET
U 2253	1	SDA2131	LED DRIVER	16POINT 10MA
U 2267	1	74HC4094	IC:HS-CMOS	8-BIT SIPO SHIFT R./L 3S
U 2270	1	74HC4094	IC:HS-CMOS	8-BIT SIPO SHIFT R./L 3S
U 2280	1	74HC4094	IC:HS-CMOS	8-BIT SIPO SHIFT R./L 3S
U 2297	1	SDA2131	LED DRIVER	16POINT 10MA
V 2201	1	BQ041-23303A	LAMP:INCD	6V 0.2A
V 2202	1	BQ041-23303A	LAMP:INCD	6V 0.2A
V 2203	1	BQ041-23303A	LAMP:INCD	6V 0.2A
XDS2201	1	EQ003-25009A	LAMP SOCKET	
XDS2202	1	EQ003-25009A	LAMP SOCKET	
XDS2203	1	EQ003-25009A	LAMP SOCKET	

P5516A CONTROL BOARD DWG NO 4G206714-1

REF NO	QTY	PARTS NO	DESCRIPTION	
BT 2060	1	BR23251HC	BATTERY:LITHIUM	3V 160MAH
C 0014	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0024	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0034	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0044	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0054	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0064	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0074	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0084	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0094	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0104	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0114	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0124	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0134	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0164	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0174	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0184	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0194	1	ECFF1E104ZF	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0204	1	ECFF1E104ZF	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0214	1	ECFF1E104ZF	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0224	1	ECFF1E104ZF	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0234	1	ECFF1E104ZF	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0244	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0254	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0264	1	ECFF1E104ZF	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0274	1	ECFF1E104ZF	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0284	1	ECFF1E104ZF	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0294	1	ECFF1E104ZF	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0304	1	ECFF1E104ZF	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0314	1	ECEA1CKS470E	C:FXD AL ELECT	47UF +-20% 16V
C 0324	1	ECFF1E104ZF	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0334	1	ECFF1E104ZF	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0344	1	ECFF1E104ZF	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0354	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0364	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0374	1	ECFF1E104ZF	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0384	1	ECFF1E104ZF	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0394	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 0404	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 0414	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 0424	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V

P5516A CONTROL BOARD DWG NO 4G206714-1

REF NO	QTY	PARTS NO	DESCRIPTION	
C 0903	1	ECKF1H181KB	C:FXD CER HI-K	180PF +-10% 50V
C 0904	1	ECKF1H181KB	C:FXD CER HI-K	180PF +-10% 50V
C 0910	1	ECCR1H101KC	C:FXD CER TC	100PF +-10% 50V NPO
C 0911	1	ECCR1H101KC	C:FXD CER TC	100PF +-10% 50V NPO
C 0912	1	ECV1ZW20X53T	C:VAR CER	20.5PF-3.3PF 250V
C 0913	1	ECCF1H220KC	C:FXD CER TC	22PF +-10% 50V NPO
C 0914	1	ECQM1H102KZ	C:FXD FLM	1000PF 10% 50V
C 0915	1	ECCF1H151KC	C:FXD CER TC	150PF +-10% 50V NPO
C 0916	1	ECV1ZW04X53T	C:VAR CER	5.5PF-1.5PF 250V
C 0918	1	ECCF1H470KC	C:FXD CER TC	47PF +-10% 50V NPO
C 0946	1	ECV1ZW20X53T	C:VAR CER	20.5PF-3.3PF 250V
C 0949	1	ECV1ZW20X53T	C:VAR CER	20.5PF-3 3PF 250V
C 0952	1	ECQM1H103KZ	C:FXD FLM	0.01UF 10% 50V
C 0963	1	ECCF1H470KC	C:FXD CER TC	47PF +-10% 50V NPO
C 0973	1	ECCR1H151K	C.FXD CER TC	150PF +-10% 50V SL
C 0977	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 0978	1	ECBT1H102KB5	C:FXD CER HI-K	1000PF 50V +-10%
C 0979	1	ECBT1H102KB5	C:FXD CER HI-K	1000PF 50V +-10%
C 0980	1	ECBT1H102KB5	C:FXD CER HI-K	1000PF 50V +-10%
C 0981	1	ECBT1H102KB5	C:FXD CER HI-K	1000PF 50V +-10%
C 0987	1	ECEA1HKS100	C:FXD AL ELECT	10UF +-20% 50V
C 0988	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 0989	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 0990	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 1001	1	ECV1ZW20X53T	C:VAR CER	20.5PF-3.3PF 250V
C 1002	1	ECCR1H271KC	C:FXD CER TC	270PF +-10% 50V NPO
C 1003	1	ECCR1H271KC	C:FXD CER TC	270PF +-10% 50V NPO
C 1026	1	ECCF1H470KC	C:FXD CER TC	47PF +-10% 50V NPO
C 1029	1	ECCR1H101KC	C:FXD CER TC	100PF +-10% 50V NPO
C 1636	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 1637	1	ECEA1HKS010	C:FXD AL ELECT	1UF +-20% 50V
C 1640	1	ECCR1H181K	C:FXD CER TC	180PF +-10% 50V SL
C 1641	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 1642	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 1650	1	ECEA1CKS470E	C:FXD AL ELECT	47UF +-20% 16V
C 1655	1	ECEA1CKS470E	C:FXD AL ELECT	47UF +-20% 16V
C 1674	1	ECCF1H470KC	C:FXD CER TC	47PF +-10% 50V NPO
C 1701	1	ECCR1H150KC	C;FXD CER TC	15PF +-10% 50V NPO
C 1714	1	ECV1ZW20X53T	C:VAR CER	20.5PF-3.3PF 250V
C 1715	1	ECCD2HC20CC	C:FXD CER TC	2PF +-0.25PF 500V NPO
C 1716	1	ECV1ZW20X53T	C:VAR CER	20.5PF-3.3PF 250V
C 1717	1	ECCD2H020CC	C:FXD CER TC	2PF +-0.25PF 500V NPO

P5516A CONTROL BOARD DWG NO 4G206714-1

REF NO	QTY	PARTS NO	DESCRIPTION	
C 1718	1	ECEA2CS010	C:FXD AL ELECT	1UF +30%-10% 160V
C 1719	1	ECKR2H103PE	C:FXD CER HI-K	10000PF +100-0% 500V
C 1720	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 1721	1	ECKR2H103PE	C:FXD CER HI-K	10000PF +100-0% 500V
C 1722	1	ECKR2H103PE	C:FXD CER HI-K	10000PF +100-0% 500V
C 2001	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 2002	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 2003	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 2019	1	ECBT1H102KB5	C:FXD CER HI-K	1000PF 50V +-10%
C 2021	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 2022	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 2023	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 2024	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 2025	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 2026	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 2027	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 2028	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 2029	1	ECBT1H102KB5	C:FXD CER HI-K	1000PF 50V +-10%
C 2032	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 2033	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 2034	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 2038	1	ECEA0JK470	C:FXD AL ELECT	47UF +-20% 6.3V
C 2051	1	ECBT1H102KB5	C:FXD CER HI-K	1000PF 50V +-10%
C 2054	1	ECBT1H102KB5	C:FXD CER HI-K	1000PF 50V +-10%
C 2063	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 2064	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 2065	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 2066	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 2067	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 2070	1	ECBT1H102KB5	C:FXD CER HI-K	1000PF 50V +-10%
C 2073	1	ECBT1H102KB5	C:FXD CER HI-K	1000PF 50V +-10%
C 2076	1	ECBT1H102KB5	C:FXD CER HI-K	1000PF 50V +-10%
C 2079	1	ECBT1H102KB5	C:FXD CER HI-K	1000PF 50V +-10%
C 2083	1	ECFF1E104ZF	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 2096	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 2097	1	ECKR1H103ZF	C.FXD CER HI-K	10000PF +80% -20% 50
C 2098	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 2099	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 2119	1	ECCR1H471K	C:FXD CER TC	470PF +-10% 50V SL
C 2120	1	ECCF1H330KC	C:FXD CER TC	33PF +-10% 50V NPO
C 2121	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 2122	1	ECCF1H220KC	C:FXD CER TC	22PF +-10% 50V NPO

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REF NO	QTY	PARTS NO	DESCRIPTION	
C 2127	1	ECCF1H121KC	C:FXD CER TC	120PF +-10% 50V NPO
C 2129	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 2130	1	ECEA1CKS100	C.FXD AL ELECT	10UF +-20% 16V
C 2131	1	ECCF1H220KC	C:FXD CER TC	22PF +-10% 50V NPO
C 2150	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 2155	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 2156	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 2157	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 2302	1	ECQM1H222KZ	C:FXD FLM	2200PF 10% 50V
C 2304	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 2305	1	ECCF1H010CC	C:FXD CER TC	1PF +-0.25PF 50V NPO
C 2306	1	ECCF1H220KC	C:FXD CER TC	22PF +-10% 50V NPO
C 2307	1	ECV1ZW20X53T	C:VAR CER	20.5PF-3.3PF 250V
C 2309	1	ECEA1HKS100	C:FXD AL ELECT	10UF +-20% 50V
C 2310	1	ECEA2CS010	C:FXD AL ELECT	1UF +30%-10% 160V
C 2312	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 2313	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 2314	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 2316	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 2317	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 2318	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 2338	1	ECEA1CU221	C:FXD AL ELECT	220UF +-20% 16V
C 2340	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 2341	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 2350	1	ECKF1H681KB	C:FXD CER HI-K	680PF +-10% 50V
C 2352	1	ECQP1103FZ	C:FXD FLM	0.01UF 1% 100V
C 2356	1	ECQP1103FZ	C:FXD FLM	0.01UF 1% 100V
C 2357	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 2366	1	ECFZ1E104ZFB	C:FXD CER MULTI	0.1UF +80%-20% 50V
C 2368	1	ECCF1H470KC	C:FXD CER TC	47PF +-10% 50V NPO
C 2369	1	ECCF1H470KC	C:FXD CER TC	47PF +-10% 50V NPO
CR 0903	1	MA154WA	DIODE:CATHODE COMMON	
CR 0904	1	MA154WK	DIODE:ANODE COMMON	100MA 40V
CR 0933	1	MA154WK	DIODE:ANODE COMMON	100MA 40V
CR 0939	1	MA165TA	DIODE	75V 100MA
CR 0968	1	MA154WK	DIODE:ANODE COMMON	100MA 40V
CR 0987	1	RD9.1ESB3		
CR 0990	1	RD9.1ESB3		
CR 1652	1	MA165TA	DIODE	75V 100MA
CR 1674	1	RD5.1ESB2	DIODE:ZENER	5.0V 400MW
CR 1675	1	RD5.1ESB2	DIODE:ZENER	5.0V 400MW

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REF NO	QTY	PARTS NO	DESCRIPTION	
CR 1678	1	MA165TA	DIODE	75V 100MA
CR 1680	1	MA165TA	DIODE	75V 100MA
CR 1681	1	MA165TA	DIODE	75V 100MA
CR 1711	1	MA165TA	DIODE	75V 100MA
CR 1712	1	MA165TA	DIODE	75V 100MA
CR 1713	1	MA165TA	DIODE	75V 100MA
CR 1714	1	MA165TA	DIODE	75V 100MA
CR 1715	1	MA156	DIODE:SI	DUAL 40V 100MA M-PACK
CR 1716	1	MA165TA	DIODE	75V 100MA
CR 1718	1	MA165TA	DIODE	75V 100MA
CR 1719	1	MA165TA	DIODE	75V 100MA
CR 1720	1	MA165TA	DIODE	75V 100MA
CR 2001	1	MA165TA	DIODE	75V 100MA
CR 2002	1	MA165TA	DIODE	75V 100MA
CR 2003	1	MA165TA	DIODE	75V 100MA
CR 2004	1	MA165TA	DIODE	75V 100MA
CR 2005	1	MA165TA	DIODE	75V 100MA
CR 2006	1	MA165TA	DIODE	75V 100MA
CR 2007	1	MA165TA	DIODE	75V 100MA
CR 2008	1	MA165TA	DIODE	75V 100MA
CR 2010	1	RD5.6ESB3	DIODE:ZENER	5.6V 400MW 5MM PITCH
CR 2026	1	MA700	DIODE:SCHOTTKY	30WA 15V
CR 2027	1	MA700	DIODE:SCHOTTKY	30WA 15V
CR 2028	1	MA700	DIODE:SCHOTTKY	30WA 15V
CR 2029	1	MA700	DIODE:SCHOTTKY	30WA 15V
CR 2034	1	MA165TA	DIODE	75V 100MA
CR 2060	1	MA150TA	DIODE:SI	100MA 35V
CR 2150	1	RD5.6ESB3	DIODE:ZENER	5.6V 400MW 5MM PITCH
CR 2326	1	MA156	DIODE:SI	DUAL 40V 100MA M-PACK
CR 2327	1	MA156	DIODE:SI	DUAL 40V 100MA M-PACK
CR 2328	1	MA156	DIODE:SI	DUAL 40V 100MA M-PACK
CR 2329	1	MA154WA	DIODE:CATHODE COMMON	
CR 2330	1	MA165TA	DIODE	75V 100MA
CR 2343	1	MA156	DIODE:SI	DUAL 40V 100MA M-PACK
DS 2303	1	EFB-AA40D101	BUZZER	4KHZ 70DB
E 0954	1	R9D	HEAT SINK	
E 0955	1	R9D	HEAT SINK	
FL 0988	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 0989	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 0990	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 2001	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A

P5516A CONTROL BOARD DWG NO 4G206714-1

REF NO	QTY	PARTS NO	DESCRIPTION	
FL 2002	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 2003	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 2107	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 2310	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 2311	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 2312	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 2313	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 2314	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 2315	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 2316	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 2317	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
FL 2318	1	EXCEMT103DT	FILTER;EMI	0.01UF 30% DC 16V 5A
J 0080	1	EMCS0652M	CONNECTOR:PIN	6P STRAIGHT
J 0134	1	EMCS1052M	CONNECTOR	10P STRAIGHT
J 1101	1	EMCS0652M	CONNECTOR:PIN	6P STRAIGHT
J 1131	1	EMCS0352M	CONNECTOR:PIN	3P STRAIGHT
J 1201	1	HLEM24S-1	CONNECTOR:PIN	24P
J 1211	1	65507-103	CONNECTOR:PIN	3P SINGLE 2.54PITCH
J 1231	1	EMCS1052M	CONNECTOR	10P STRAIGHT
J 1300	1	EMCS1052M	CONNECTOR	10P STRAIGHT
J 1310	1	HLEM16S-1	CONNECTOR:PIN	16P
J 1320	1	EMCS0352M	CONNECTOR:PIN	3P STRAIGHT
J 1330	1	EMCS0252M	CONNECTOR PIN	2P STRAIGHT
J 1350	1	HLEM16S-1	CONNECTOR:PIN	16P
J 1360	1	HLEM16S-1	CONNECTOR:PIN	16P
J 1440	1	EMCS0552M	CONNECTOR PIN	5PIN STRAIGHT
J 1531	1	EMCS0552M	CONNECTOR PIN	5PIN STRAIGHT
J 1600	1	EMCS0352M	CONNECTOR:PIN	3P STRAIGHT
J 1610	1	EMCS0252M	CONNECTOR PIN	2P STRAIGHT
J 1620	1	EMCS0252M	CONNECTOR PIN	2P STRAIGHT
J 1651	1	EMCS0252M	CONNECTOR PIN	2P STRAIGHT
L 0960	1	ELEPGR22MA		
L 0961	1	ELEPGR22MA		
L 1640	1	ELEH221KA	COIL:CHOKE	220UH 10%
L 1642	1	ELEH221KA	COIL:CHOKE	220UH 10%
L 2155	1	ELEH5R6KA	COIL:CHOKE	5.6UH 10%
L 2156	1	ELEH5R6KA	COIL:CHOKE	5.6UH 10%
L 2157	1	ELEH5R6KA	COIL:CHOKE	5.6UH 10%
MP	1	4G618419-0BB	HEATSINK:V MAIN	P5516A
MP	1	4G618462-1B	SHIELD:CNTRL PB	P5516A
MP 0943	1	4G540060-1MF	HOLDER:TR	P-059V

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REF NO	QTY	PARTS NO	DESCRIPTION	
MP 0952	1	4G540060-1MF	HOLDER:TR	P-059V
Q 0906	1	2SC1359TA-AB	TSTR:SI NPN	PC:250MW FT:300MHZ
Q 0910	1	2SC2570A	TSTR:SI NPN	600MW FT 5GHZ
Q 0911	1	2SC2570A	TSTR:SI NPN	600MW FT 5GHZ
Q 0912	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0913	1	2SC2026	TSTR:SI NPN	PC:250MW FT:2000MHZ
Q 0918	1	2SC1359TA-AB	TSTR:SI NPN	PC:250MW FT:300MHZ
Q 0919	1	2SC3811-RS	TCSTR SI NPN	400MW FT 450MHZ
Q 0931	1	2SC1359TA-AB	TSTR:SI NPN	PC:250MW FT:300MHZ
Q 0932	1	2SC1359TA-AB	TSTR:SI NPN	PC:250MW FT:300MHZ
Q 0936	1	2SC2901	TSTR:SI NPN	PC:600MW FT:750MHZ
Q 0937	1	2SA1161		
Q 0938	1	2SA1161		
Q 0943	1	2SC2408A	TSTR:SI NPN	PC:600MW FT:3.5GHZ
Q 0944	1	2SC2408A	TSTR:SI NPN	PC:600MW FT:3.5GHZ
Q 0952	1	2SC2408A	TSTR:SI NPN	PC:600MW FT:3.5GHZ
Q 0953	1	2SC2408A	TSTR:SI NPN	PC:600MW FT:3.5GHZ
Q 0954	1	2SC1252N	TSTR:SI NPN	PC:800MW FT:1700MHZ
Q 0955	1	2SC1252N	TSTR:SI NPN	PC:800MW FT:1700MHZ
Q 0966	1	2SC1359TA-AB	TSTR:SI NPN	PC:250MW FT:300MHZ
Q 0967	1	2SC1359TA-AB	TSTR:SI NPN	PC:250MW FT:300MHZ
Q 0969	1	2SC2901	TSTR:SI NPN	PC:600MW FT:750MHZ
Q 0974	1	2SA838TA	TSTR:SI PNP	PC:250MW FT:300MHZ
Q 0975	1	2SA838TA	TSTR:SI PNP	PC:250MW FT:300MHZ
Q 0987	1	2SC828A-RS	TSTR:SI NPN	PC:250MW FT:220MHZ
Q 0989	1	2SD1010-S	TSTR:SI NPN	PC:400MW HFE:1000
Q 0990	1	2SC828A-RS	TSTR:SI NPN	PC:250MW FT:220MHZ
Q 1001	1	2SA1161		
Q 1002	1	2SA1161		
Q 1632	1	2SA564A-PQ	TSTR:SI PNP	PC:250MW FT:80MHZ
Q 1650	1	2SC2901	TSTR:SI NPN	PC:600MW FT:750MHZ
Q 1651	1	2SC2901	TSTR:SI NPN	PC:600MW FT:750MHZ
Q 1652	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 1660	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 1661	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 1662	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 1663	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 1670	1	UN4111	RESISTOR BUILT-IN TSTR	300MW 50V
Q 1671	1	UN4111	RESISTOR BUILT-IN TSTR	300MW 50V
Q 1680	1	2SA564A-PQ	TSTR:SI PNP	PC:250MW FT:80MHZ
Q 1681	1	2SC1359TA-AB	TSTR:SI NPN	PC:250MW FT:300MHZ

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REF NO	QTY	PARTS NO	DESCRIPTION	
Q 1682	1	2SA564A-PQ	TSTR:SI PNP	PC:250MW FT:80MHZ
Q 1683	1	2SC1359TA-AB	TSTR:SI NPN	PC:250MW FT:300MHZ
Q 1711	1	2SA1206	TSTR:SI PNP	PC:600MW FT:1000MHZ
Q 1712	1	2SC2901	TSTR:SI NPN	PC:600MW FT:750MHZ
Q 1713	1	2SA1406	TSTR:SI PNP	1.2W FT400MHZ
Q 1714	1	2SA1406	TSTR:SI PNP	1.2W FT400MHZ
Q 1715	1	2SC3600	TSTR:SI NPN	1.2W FT400MHZ
Q 1716	1	2SC3600	TSTR:SI NPN	1.2W FT400MHZ
Q 2010	1	2SB977	TSTR:SI PNP	750MW 1A
Q 2011	1	2SD1010-S	TSTR:SI NPN	PC:400MW HFE:1000
Q 2121	1	2SD1010-S	TSTR:SI NPN	PC:400MW HFE:1000
Q 2150	1	2SD1010-S	TSTR:SI NPN	PC:400MW HFE:1000
Q 2310	1	2SA838TA	TSTR:SI PNP	PC:250MW FT:300MHZ
Q 2325	1	2SC3811-RS	TCSTR SI NPN	400MW FT 450MHZ
Q 2335	1	2SD973A-RS	TSTR:SI NPN	PC:1W FT:200MHZ
Q 2336	1	2SB793A-S	TSTR:SI PNP	1000MW -50V -1A
Q 2340	1	2SD1273-PQ	T	
Q 2341	1	2SC1359TA-AB	TSTR:SI NPN	PC:250MW FT:300MHZ
Q 2345	1	2SA838TA	TSTR:SI PNP	PC:250MW FT:300MHZ
Q 2352	1	2SA838TA	TSTR:SI PNP	PC:250MW FT:300MHZ
Q 2355	1	UN4211	RESISTOR BUILT-IN TSTR	300MW 50V
Q 2356	1	2SA838TA	TSTR:SI PNP	PC:250MW FT:300MHZ
Q 2360	1	2SC2901	TSTR:SI NPN	PC:600MW FT:750MHZ
Q 2361	1	2SC2901	TSTR:SI NPN	PC:600MW FT:750MHZ
Q 2362	1	2SC2901	TSTR:SI NPN	PC:600MW FT:750MHZ
Q 2363	1	2SC2901	TSTR:SI NPN	PC:600MW FT:750MHZ
R 0900	1	EROS2TKF2870	R:FXD MET FLM	287 OHM 1% 1/4W
R 0903	1	EROS2TKF2870	R:FXD MET FLM	287 OHM 1% 1/4W
R 0904	1	PK502H203H0	R:VAR CERMET	
R 0905	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 0906	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 0907	1	EROS2TKF56R2	R:FXD MET FLM	56.2 OHM 1/4 W
R 0909	1	EROS2TKF15R0	R:FXD MET FLM	15.0 OHM 1% 1/4W
R 0910	1	ERDS2TJ151T	R:FXD CARBON	150 OHM 5% 1/4W
R 0911	1	ERDS2TJ151T	R:FXD CARBON	150 OHM 5% 1/4W
R 0912	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 0914	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 0915	1	ERDS2TJ132T	R:FXD CARBON	1.3K OHM 5% 1/4W
R 0916	1	EROS2TKF3240	R:FXD MET FLM	324 OHM 1% 1/4W
R 0917	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0918	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W

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REF NO	QTY	PARTS NO	DESCRIPTION	
R 0920	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0921	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 0922	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 0923	1	PK502H102H0	R:VAR CERMET	1K OHM +-20% 1/2W
R 0924	1	EROS2TKF47R5	R:FXD MET FLM	47.5 OHM 1% 1/4W
R 0925	1	EROS2TKF47R5	R:FXD MET FLM	47.5 OHM 1% 1/4W
R 0926	1	EROS1TKF1100	R:FXD MET FLM	110 OHM 1% 1/2W
R 0927	1	EROS1TKF1100	R:FXD MET FLM	110 OHM 1% 1/2W
R 0928	1	ERDS2TJ680T	R:FXD CARBON	68 OHM 5% 1/4W
R 0929	1	EROS2TKF3740	R:FXD MET FLM	374 OHM 1% 1/4W
R 0930	1	ERDS2TJ680T	R:FXD CARBON	68 OHM 5% 1/4W
R 0931	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0932	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0933	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0934	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0935	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 0936	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 0937	1	ERDS2TJ510T	R:FXD CARBON	51 OHM 5% 1/4W
R 0938	1	ERDS2TJ510T	R:FXD CARBON	51 OHM 5% 1/4W
R 0940	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W
R 0941	1	EROS2TKF2801	R:FXD MET FLM	2.80K OHM 1% 1/4W
R 0942	1	EROS2TKF1301	R:FXD MET FLM	1.30K OHM 1% 1/4W
R 0943	1	EROS2TKF1000	R:FXD MET FLM	100 OHM 1% 1/4W
R 0944	1	EROS2TKF1000	R:FXD MET FLM	100 OHM 1% 1/4W
R 0945	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 0946	1	ERDS2TJ560T	R:FXD CARBON	56 OHM 5% 1/4W
R 0947	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0948	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0949	1	ERDS2TJ560T	R:FXD CARBON	56 OHM 5% 1/4W
R 0950	1	EROS1TKF1400	R:FXD METOXD	14 OHM +-1% 1/2W
R 0951	1	EROS1TKF1400	R:FXD METOXD	14 OHM +-1% 1/2W
R 0952	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 0953	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 0954	1	ERDS2TJ330T	R:FXD CARBON	33 OHM 5% 1/4W
R 0955	1	ERDS2TJ330T	R:FXD CARBON	33 OHM 5% 1/4W
R 0956	1	ERG2SJ820P		
R 0957	1	ERG2SJ820P		
R 0958	1	ERG2SJ820P		
R 0959	1	ERG2SJ820P		
R 0960	1	ERG2SJ820P		
R 0961	1	ERG2SJ820P		
R 0962	1	EROS2TKF3240	R:FXD MET FLM	324 OHM 1% 1/4W

P5516A CONTROL BOARD DWG NO 4G206714-1

REF NO	QTY	PARTS NO	DESCRIPTION	
R 0963	1	EROS2TKF3920	R:FXD MET FLM	392 OHM 1% 1/4W
R 0964	1	ERDS2TJ181T	R:FXD CARBON	180 OHM 5% 1/4W
R 0965	1	EROS2TKF2210	R:FXD MET FLM	221 OHM 1% 1/4W
R 0966	1	ERDS2TJ122T	R:FXD CARBON	1.2K OHM 5% 1/4W
R 0967	1	ERDS2TJ122T	R:FXD CARBON	1.2K OHM 5% 1/4W
R 0968	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0969	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 0970	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0971	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 0972	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0973	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0974	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 0975	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 0976	1	ERDS2TJ272T	R:FXD CARBON	2.7K OHM 5% 1/4W
R 0977	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 0978	1	ERDS2TJ220T	R:FXD CARBON	22 OHM 5% 1/4W
R 0979	1	ERDS2TJ220T	R:FXD CARBON	22 OHM 5% 1/4W
R 0980	1	EROS2TKF1150	R:FXD MET FLM	115 OHM 1% 1/4W
R 0981	1	EROS1TKF1620	R:FXD MET FLM	162 OHM 1% 1/2W
R 0983	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0985	1	EROS2TKF2100	R:FXD MET FLM	210 OHM 1% 1/4W
R 0986	1	EROS2TKF2100	R:FXD MET FLM	210 OHM 1% 1/4W
R 0987	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0988	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0989	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 0990	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0991	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0992	1	EROS1TKF1620	R:FXD MET FLM	162 OHM 1% 1/2W
R 0993	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 0995	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 0996	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 0997	1	ERDS2TJ183T	R:FXD CARBON	18K OHM 5% 1/4W
R 0998	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W
R 0999	1	EROS2TKF15R0	R:FXD MET FLM	15.0 OHM 1% 1/4W
R 1001	1	EROS2TKF3010	R:FXD MET FLM	301 OHM 1% 1/4W
R 1004	1	PK502H101H0	R:VAR CERMET	100 OHM +-20% 1/2W
R 1005	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W
R 1006	1	ERDS2TJ4R7T	R:FXD CARBON	4.7 OHM 5% 1/4W
R 1007	1	ERDS2TJ4R7T	R:FXD CARBON	4.7 OHM 5% 1/4W
R 1008	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W
R 1009	1	ERDS2TJ121T	R:FXD CARBON	120 OHM 5% 1/4W
R 1010	1	ERDS2TJ332T	R:FXD CARBON	3.3K OHM 5% 1/4W

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REF NO	QTY	PARTS NO	DESCRIPTION	
R 1011	1	ERDS2TJ680T	R:FXD CARBON	68 OHM 5% 1/4W
R 1012	1	ERG1SJ430P		
R 1013	1	ERDS2TJ391T	R:FXD CARBON	390 OHM 5% 1/4W
R 1014	1	ERDS2TJ391T	R:FXD CARBON	390 OHM 5% 1/4W
R 1015	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 1016	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 1017	1	EROS2TKF90R9	R:FXD MET FLM	90.9 OHM 1% 1/4W
R 1018	1	EROS2TKF90R9	R:FXD MET FLM	90.9 OHM 1% 1/4W
R 1019	1	ERDS2TJ750T	R:FXD CARBON	75 OHM 5% 1/4W
R 1020	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1021	1	EROS2TKF8250	R:FXD MET FLM	825 OHM 1% 1/4W
R 1022	1	EROS2TKF8250	R:FXD MET FLM	825 OHM 1% 1/4W
R 1023	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 1024	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 1025	1	ERDS2TJ121T	R:FXD CARBON	120 OHM 5% 1/4W
R 1026	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1028	1	PK502H501H0	R:VAR CERMET	500 OHM +-20% 1/2W
R 1029	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W
R 1030	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 1626	1	ERDS2TJ680T	R:FXD CARBON	68 OHM 5% 1/4W
R 1630	1	PK502H501H0	R:VAR CERMET	500 OHM +-20% 1/2W
R 1631	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 1633	1	ERDS2TJ473T	R:FXD CARBON	47K OHM 5% 1/4W
R 1635	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 1636	1	ERDS2TJ823T	R:FXD CARBON	82K OHM 5% 1/4W
R 1637	1	EROS2TKF4321	R:FXD MET FLM	4.32K OHM 1% 1/4W
R 1638	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 1639	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1640	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 1641	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 1650	1	EROS2TKF2051	R:FXD MET FLM	2.05K OHM 1% 1/4W
R 1651	1	EROS2TKF1301	R:FXD MET FLM	1.30K OHM 1% 1/4W
R 1652	1	EROS2TKF4870	R:FXD MET FLM	487 OHM 1% 1/4W
R 1653	1	EROS2TKF2431	R:FXD MET FLM	2.43K OHM 1% 1/4W
R 1654	1	EROS2TKF2431	R:FXD MET FLM	2.43K OHM 1% 1/4W
R 1655	1	EROS2TKF2431	R:FXD MET FLM	2.43K OHM 1% 1/4W
R 1656	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1657	1	EROS2TKF5760	R:FXD MET FLM	576 OHM 1% 1/4W
R 1658	1	EROS2TKF5760	R:FXD MET FLM	576 OHM 1% 1/4W
R 1659	1	PK502H101H0	R:VAR CERMET	100 OHM +-20% 1/2W
R 1660	1	ERDS2TJ680T	R:FXD CARBON	68 OHM 5% 1/4W
R 1661	1	EROS2TKF1101	R:FXD MET FLM	1.1K OHM 1% 1/4W

P5516A CONTROL BOARD DWG NO 4G206714-1

REF NO	QTY	PARTS NO	DESCRIPTION	
R 1662	1	EROS2TKF1101	R:FXD MET FLM	1.1K OHM 1% 1/4W
R 1663	1	EROS2TKF1101	R:FXD MET FLM	1.1K OHM 1% 1/4W
R 1664	1	EROS2TKF1101	R:FXD MET FLM	1.1K OHM 1% 1/4W
R 1665	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1666	1	EROS2TKF1101	R:FXD MET FLM	1.1K OHM 1% 1/4W
R 1667	1	PK502H101H0	R:VAR CERMET	100 OHM +-20% 1/2W
R 1668	1	EROS2TKF1101	R:FXD MET FLM	1.1K OHM 1% 1/4W
R 1670	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 1671	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 1673	1	ERDS2TJ750T	R:FXD CARBON	75 OHM 5% 1/4W
R 1674	1	ERDS2TJ750T	R:FXD CARBON	75 OHM 5% 1/4W
R 1679	1	PK502H102H0	R:VAR CERMET	1K OHM +-20% 1/2W
R 1681	1	ERDS2TJ181T	R:FXD CARBON	180 OHM 5% 1/4W
R 1682	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 1683	1	ERDS2TJ271T	R:FXD CARBON	270 OHM 5% 1/4W
R 1685	1	ERDS2TJ272T	R:FXD CARBON	2.7K OHM 5% 1/4W
R 1686	1	ERDS2TJ272T	R:FXD CARBON	2.7K OHM 5% 1/4W
R 1687	1	ERDS2TJ681T	R:FXD CARBON	680 OHM 5% 1/4W
R 1688	1	ERDS2TJ511T	R:FXD CARBON	510 OHM 5% 1/4W
R 1689	1	ERDS2TJ681T	R:FXD CARBON	680 OHM 5% 1/4W
R 1690	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 1692	1	ERDS2TJ112T	R:FXD CARBON	1.1K OHM 5% 1/4W
R 1693	1	ERDS2TJ112T	R:FXD CARBON	1.1K OHM 5% 1/4W
R 1709	1	ERDS2TJ681T	R:FXD CARBON	680 OHM 5% 1/4W
R 1711	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 1712	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 1713	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 1714	1	ERG1SJ512P		
R 1715	1	ERG1SJ682P		
R 1716	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1717	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W
R 1718	1	ERG2SJ123P		
R 1719	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 1720	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 1721	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 1722	1	ERG2SJ123P		
R 1723	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 1724	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1725	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W
R 1726	1	ERG1SJ512P		
R 1727	1	ERG1SJ682P		
R 1728	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W

P5516A CONTROL BOARD DWG NO 4G206714-1

REF NO	QTY	PARTS NO	DESCRIPTION	
R 1730	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 1731	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 1769	1	ERDS2TJ182T	R:FXD CARBON	1.8K OHM 5% 1/4W
R 1780	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 2000	1	PK502H503H0	R VAR CERMET	50K OHM 20 %
R 2001	1	EXBP88103J	R:NETWORK	10K OHM X8 5% 1/8W
R 2005	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2006	1	EROS2TKF2002	R:FXD MET FLM	20.0K OHM 1% 1/4W
R 2009	1	EROS2TKF1743	R:FXD MET FLM	174K OHM 1% 1/4W
R 2010	1	EXBLD10103GC	R:NETWORK	10BIT +-2% FSA +-0.2%
R 2011	1	EROS2TKF1743	R:FXD MET FLM	174K OHM 1% 1/4W
R 2012	1	EROS2TKF1003	R:FXD MET FLM	100K OHM 1% 1/4W
R 2013	1	EROS2TKF1003	R:FXD MET FLM	100K OHM 1% 1/4W
R 2014	1	EROS2TKF1003	R:FXD MET FLM	100K OHM 1% 1/4W
R 2015	1	EROS2TKF1003	R:FXD MET FLM	100K OHM 1% 1/4W
R 2016	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2017	1	EROS2TKF1913	R:FXD MET FLM	191K OHM 1% 1/4W
R 2018	1	EROS2TKF1913	R:FXD MET FLM	191K OHM 1% 1/4W
R 2019	1	EROS2TKF1003	R:FXD MET FLM	100K OHM 1% 1/4W
R 2020	1	EROS2TKF1001	R:FXD MET FLM	1K OHM 1% 1/4W
R 2021	1	EXBLD8103GC	R:NETWORK	10BIT +-20% 0.5W
R 2022	1	ERDS2TJ823T	R:FXD CARBON	82K OHM 5% 1/4W
R 2023	1	ERDS2TJ823T	R:FXD CARBON	82K OHM 5% 1/4W
R 2025	1	EROS2TKF1003	R:FXD MET FLM	100K OHM 1% 1/4W
R 2026	1	EROS2TKF3483	R:FXD MET FLM	348K OHM 1% 1/4W
R 2027	1	EROS2TKF1003	R:FXD MET FLM	100K OHM 1% 1/4W
R 2028	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2029	1	EROS2TKF1003	R:FXD MET FLM	100K OHM 1% 1/4W
R 2030	1	EROS2TKF1001	R:FXD MET FLM	1K OHM 1% 1/4W
R 2031	1	EXBLD8103GC	R:NETWORK	10BIT +-20% 0.5W
R 2032	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2033	1	ERDS2TJ223T	R:FXD CARBON	22K OHM 5% 1/4W
R 2034	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 2035	1	EROS2TKF2491	R:FXD MET FLM	2.49K OHM 1% 1/4W
R 2036	1	EROS2TKF9531	R:FXD MET FLM	9.53K OHM 1% 1/4W
R 2037	1	PK502H102H0	R:VAR CERMET	1K OHM +-20% 1/2W
R 2038	1	EROS2TKF6191	R:FXD MET FLM	6.19K OHM 1% 1/4W
R 2039	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 2040	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 2041	1	EROS2TKF1002	R:FXD MET FLM	10.0K OHM 1% 1/4W
R 2042	1	EROS2TKF2002	R:FXD MET FLM	20.0K OHM 1% 1/4W
R 2043	1	EROS2TKF4022	R:FXD MET FLM	40.2K OHM 1% 1/4W

P5516A CONTROL BOARD DWG NO 4G206714-1

REF NO	QTY	PARTS NO	DESCRIPTION	
R 2044	1	EROS2TKF8062	R:FXD MET FLM	80.6K OHM 1% 1/4W
R 2045	1	EROS2TKF1623	R:FXD MET FLM	162K OHM 1% 1/4W
R 2046	1	EROS2TKF3243	R:FXD MET FLM	324K OHM 1% 1/4W
R 2047	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2048	1	ERDS2TJ183T	R:FXD CARBON	18K OHM 5% 1/4W
R 2049	1	ERDS2TJ183T	R:FXD CARBON	18K OHM 5% 1/4W
R 2050	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 2051	1	EROS2TKF3483	R:FXD MET FLM	348K OHM 1% 1/4W
R 2052	1	EROS2TKF3571	R:FXD MET FLM	3.57K OHM 1% 1/4W
R 2053	1	EROS2TKF4991	R:FXD MET FLM	4.99K OHM 1% 1/4W
R 2054	1	EROS2TKF1003	R:FXD MET FLM	100K OHM 1% 1/4W
R 2055	1	ERDS2TJ473T	R:FXD CARBON	47K OHM 5% 1/4W
R 2056	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2057	1	EROS2TKF2002	R:FXD MET FLM	20.0K OHM 1% 1/4W
R 2058	1	ERDS2TJ392T	R:FXD CARBON	3.9K OHM 5% 1/4W
R 2059	1	ERDS2TJ392T	R:FXD CARBON	3.9K OHM 5% 1/4W
R 2060	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 2061	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 2062	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2063	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 2064	1	ERDS2TJ473T	R:FXD CARBON	47K OHM 5% 1/4W
R 2065	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 2066	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 2067	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 2068	1	EROS2TKF1913	R:FXD MET FLM	191K OHM 1% 1/4W
R 2070	1	EROS2TKF3483	R:FXD MET FLM	348K OHM 1% 1/4W
R 2071	1	EROS2TKF3483	R:FXD MET FLM	348K OHM 1% 1/4W
R 2072	1	EROS2TKF1003	R:FXD MET FLM	100K OHM 1% 1/4W
R 2073	1	EROS2TKF3483	R:FXD MET FLM	348K OHM 1% 1/4W
R 2074	1	EROS2TKF3483	R:FXD MET FLM	348K OHM 1% 1/4W
R 2075	1	EROS2TKF1003	R:FXD MET FLM	100K OHM 1% 1/4W
R 2076	1	EROS2TKF1822	R:FXD MET FLM	18.2K OHM 1% 1/4W
R 2077	1	EROS2TKF3323	R:FXD MET FLM	332K OHM 1% 1/4W
R 2078	1	EROS2TKF1622	R:FXD MET FLM	16.2K OHM 1% 1/4W
R 2079	1	EROS2TKF1822	R:FXD MET FLM	18.2K OHM 1% 1/4W
R 2080	1	EROS2TKF3323	R:FXD MET FLM	332K OHM 1% 1/4W
R 2081	1	EROS2TKF1622	R:FXD MET FLM	16.2K OHM 1% 1/4W
R 2082	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2083	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 2084	1	EROS2TKF1913	R:FXD MET FLM	191K OHM 1% 1/4W
R 2085	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 2086	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W

P5516A CONTROL BOARD DWG NO 4G206714-1

REF NO	QTY	PARTS NO	DESCRIPTION	
R 2087	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2088	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2089	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2090	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2091	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2092	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2093	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2094	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 2095	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 2096	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2097	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2098	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2099	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2101	1	ERDS2TJ105T	R:FXD CARBON	1M OHM 5% 1/4W
R 2102	1	ERDS2TJ152T	R:FXD CARBON	1.5K OHM 5% 1/4W
R 2117	1	ERDS2TJ392T	R:FXD CARBON	3.9K OHM 5% 1/4W
R 2118	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 2119	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2120	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 2121	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 2122	1	EROS2TKF1002	R:FXD MET FLM	10.0K OHM 1% 1/4W
R 2123	1	PK502H301H0	R:VAR CERMET	300 OHM +-20% 0.5W
R 2124	1	ERDS2TJ821T	R:FXD CARBON	820 OHM 5% 1/4W
R 2125	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 2126	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 2127	1	PK502H301H0	R:VAR CERMET	300 OHM +-20% 0.5W
R 2128	1	ERDS2TJ561T	R:FXD CARBON	560 OHM 5% 1/4W
R 2129	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2130	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2131	1	EROS2TKF1002	R:FXD MET FLM	10.0K OHM 1% 1/4W
R 2132	1	EROS2TKF6190	R:FXD MET FLM	619 OHM 1% 1/4W
R 2133	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 2134	1	PK502H501H0	R:VAR CERMET	500 OHM +-20% 1/2W
R 2135	1	ERDS2TJ182T	R:FXD CARBON	1.8K OHM 5% 1/4W
R 2136	1	PK502H301H0	R:VAR CERMET	300 OHM +-20% 0.5W
R 2137	1	ERDS2TJ561T	R:FXD CARBON	560 OHM 5% 1/4W
R 2138	1	EXBLD10103GC	R:NETWORK	10BIT +-2% FSA +-0.2%
R 2139	1	EXBLD10103GC	R:NETWORK	10BIT +-2% FSA +-0.2%
R 2140	1	ERDS2TJ182T	R:FXD CARBON	1.8K OHM 5% 1/4W
R 2141	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 2142	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2150	1	ERDS2TJ272T	R:FXD CARBON	2.7K OHM 5% 1/4W

P5516A CONTROL BOARD DWG NO 4G206714-1

REF NO	QTY	PARTS NO	DESCRIPTION	
R 2301	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 2302	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 2303	1	ERDS2TJ224T	R:FXD CARBON	220K OHM 5% 1/4W
R 2304	1	ERDS2TJ392T	R:FXD CARBON	3.9K OHM 5% 1/4W
R 2305	1	ERDS2TJ153T	R:FXD CARBON	15K OHM 5% 1/4W
R 2306	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 2307	1	ERDS2TJ512T	R:FXD CARBON	5.1K OHM 5% 1/4W
R 2308	1	ERDS2TJ223T	R:FXD CARBON	22K OHM 5% 1/4W
R 2309	1	ERDS2TJ513T	R:FXD CARBON	51K OHM 5% 1/4W
R 2310	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 2311	1	ERDS2TJ153T	R:FXD CARBON	15K OHM 5% 1/4W
R 2313	1	ERDS2TJ752T	R:FXD CARBON	7.5K OHM 5% 1/4W
R 2314	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2315	1	ERDS2TJ822T	R:FXD CARBON	8.2K OHM 5% 1/4W
R 2317	1	ERDS2TJ223T	R:FXD CARBON	22K OHM 5% 1/4W
R 2320	1	ERDS2TJ123T	R:FXD CARBON	12K OHM 5% 1/4W
R 2321	1	ERDS2TJ682T	R:FXD CARBON	6.8K OHM 5% 1/4W
R 2322	1	ERDS2TJ682T	R:FXD CARBON	6.8K OHM 5% 1/4W
R 2323	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2324	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 2327	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 2328	1	ERDS2TJ331T	R:FXD CARBON	330 OHM 5% 1/4W
R 2329	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W
R 2330	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 2335	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2340	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 2341	1	ERDS2TJ153T	R:FXD CARBON	15K OHM 5% 1/4W
R 2342	1	ERDS2TJ562T	R:FXD CARBON	5.6K OHM 5% 1/4W
R 2343	1	ERDS2TJ272T	R:FXD CARBON	2.7K OHM 5% 1/4W
R 2345	1	PK502H101H0	R:VAR CERMET	100 OHM +-20% 1/2W
R 2346	1	EROS2TKF1241	R:FXD MET FLM	1.24K OHM 1% 1/4W
R 2347	1	EROS2TKF49R9	R:FXD MET FLM	49.9 OHM 1% 1/4W
R 2350	1	ERDS2TJ273T	R:FXD CARBON	27K OHM 5% 1/4W
R 2351	1	EROS2TKF3161	R:FXD MET FLM	3.16K OHM 1% 1/4W
R 2352	1	EROS2TKF3921	R:FXD MET FLM	3.92K OHM 1% 1/4W
R 2354	1	EROS2TKF1433	R:FXD MET FLM	143K OHM 1% 1/4W
R 2355	1	EROS2TKF1433	R:FXD MET FLM	143K OHM 1% 1/4W
R 2356	1	EROS2TKF3921	R:FXD MET FLM	3.92K OHM 1% 1/4W
R 2357	1	EROS2TKF2801	R:FXD MET FLM	2.80K OHM 1% 1/4W
R 2358	1	ERDS2TJ4R7T	R:FXD CARBON	4.7 OHM 5% 1/4W
R 2360	1	ERDS2TJ821T	R:FXD CARBON	820 OHM 5% 1/4W
R 2361	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W

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REF NO	QTY	PARTS NO	DESCRIPTION	
R 2362	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W
R 2363	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 2364	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W
R 2365	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 2366	1	ERDS2TJ821T	R:FXD CARBON	820 OHM 5% 1/4W
R 2367	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 2368	1	ERDS2TJ331T	R:FXD CARBON	330 OHM 5% 1/4W
R 2369	1	ERDS2TJ331T	R:FXD CARBON	330 OHM 5% 1/4W
R 2370	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2371	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 2374	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
RT 0912	1	ERTD2FFL351S	THERMISTOR	350 OHM 15%
S 2301	1	EVQRAAL10	LEVER SW	DC 30V 300MA
U 1672	1	TC40H000P	IC:C MOS	QUAD 2-INPUT NAND GATE
U 2004	1	TC40H374P	IC:C MOS	OCTAL D-TYPE F-F 3-STATE
U 2005	1	TC40H374P	IC:C MOS	OCTAL D-TYPE F-F 3-STATE
U 2006	1	TC40H244P	IC:C MOS	OCTAL BUFFER 3-STATE
U 2007	1	AN1081	IC:OP AMP	SINGLE J-FET
U 2008	1	TC40H244P	IC:C MOS	OCTAL BUFFER 3-STATE
U 2010	1	AN78L05	IC:V RGLTR	0.1A +5V TO-92
U 2012	1	AN1084	IC:OP AMP	QUAD J-FET
U 2018	1	TC40H000P	IC:C MOS	QUAD 2-INPUT NAND GATE
U 2019	1	AN1084	IC:OP AMP	QUAD J-FET
U 2020	1	TC40H374P	IC:C MOS	OCTAL D-TYPE F-F 3-STATE
U 2022	1	AN1084	IC:OP AMP	QUAD J-FET
U 2030	1	TC40H374P	IC:C MOS	OCTAL D-TYPE F-F 3-STATE
U 2032	1	UPD78C10G	IC:CMOS	8BIT MICRO PROCESSOR
U 2037	1	TC40H010P	IC:C MOS	TRIPLE 3-INPUT NAND GATE
U 2038	1	TC40H374P	IC:C MOS	OCTAL D-TYPE F-F 3-STATE
U 2040	1	TC40H374P	IC:C MOS	OCTAL D-TYPE F-F 3-STATE
U 2050	1	TC40H374P	IC:C MOS	OCTAL D-TYPE F-F 3-STATE
U 2055	1	TC40H000P	IC:C MOS	QUAD 2-INPUT NAND GATE
U 2056	1	D27C512-15	IC:N MOS	
U 2057	1	UPD4464C-15	IC: C MOS	
U 2060	1	TC40H374P	IC:C MOS	OCTAL D-TYPE F-F 3-STATE
U 2061	1	TC40H259P	IC:C MOS	8-BIT ADDRESSABLE LATCH
U 2062	1	TC40H259P	IC:C MOS	8-BIT ADDRESSABLE LATCH
U 2101	1	74HC04	IC:HS-CMOS	HEX INVERTER
U 2102	1	74HC393	IC:HS-CMOS	DUAL 4-BIT BINARY COUNT.
U 2103	1	74HC393	IC:HS-CMOS	DUAL 4-BIT BINARY COUNT.

P5516A CONTROL BOARD DWG NO 4G206714-1

REF NO	QTY	PARTS NO	DESCRIPTION	
U 2104	1	74HC244	IC:HS-CMOS	OCTAL TRI-STATE BUFFER
U 2105	1	74HC244	IC:HS-CMOS	OCTAL TRI-STATE BUFFER
U 2106	1	TC40H374P	IC:C MOS	OCTAL D-TYPE F-F 3-STATE
U 2107	1	TC40H000P	IC:C MOS	QUAD 2-INPUT NAND GATE
U 2108	1	TC40H374P	IC:C MOS	OCTAL D-TYPE F-F 3-STATE
U 2109	1	74HC10	IC:HS-CMOS	TRIPLE 3-NAND
U 2110	1	74HC109	IC:HS-CMOS	DUAL J-K F/F (PR,CLR)
U 2112	1	74HC02	IC:HS-CMOS	QUAD 2-NOR
U 2113	1	74HC10	IC:HS-CMOS	TRIPLE 3-NAND
U 2114	1	74HC00	IC:HS-CMOS	QUAD 2-NAND
U 2115	1	74HC02	IC:HS-CMOS	QUAD 2-NOR
U 2116	1	74HC30	IC:HS-CMOS	8-NAND
U 2120	1	UPD4364C-15	IC: C MOS	
U 2121	1	UPD4364C-15	IC: C MOS	
U 2122	1	TC40H374P	IC:C MOS	OCTAL D-TYPE F-F 3-STATE
U 2123	1	TC40H374P	IC:C MOS	OCTAL D-TYPE F-F 3-STATE
U 2124	1	74HC174	IC:HS-CMOS	HEX D-TYPE F/F (CK,CLR)
U 2125	1	74HC374	IC:HS-CMOS	OCTAL TRI-STATE D-F/F
U 2127	1	74HC00	IC:HS-CMOS	QUAD 2-NAND
U 2131	1	AN1082	IC:OP AMP	DUAL J-FET
U 2146	1	74HC374	IC:HS-CMOS	OCTAL TRI-STATE D-F/F
U 2301	1	74HC00	IC:HS-CMOS	QUAD 2-NAND
U 2302	1	74HC00	IC:HS-CMOS	QUAD 2-NAND
U 2303	1	TC40H000P	IC:C MOS	QUAD 2-INPUT NAND GATE
U 2305	1	TC40H010P	IC:C MOS	TRIPLE 3-1NPUT NAND GATE
U 2360	1	74HC00	IC:HS-CMOS	QUAD 2-NAND
XU 2056	1	DILB28P-8J	IC SOCKET	28-PIN DIL
Y 2036	1	CST12-OMT	CERAMIC OSC	12MHZ
Y 2101	1	EFO-FC3204A5	CERAMIC OSC	F=1MHZ

P5516A POWER & HV DWG NO 4G206715-1

REF NO	QTY	PARTS NO	DESCRIPTION	
C 1800	1	ECEA1CG470S	C:FXD AL ELECT	
C 1801	1	ECEA1CG471S	C:FXD AL ELECT	470UF +-20% 16V
C 1802	1	ECKF1H223ZF	C:FXD CER HI-K	22000PF +80-20% 500V
C 1803	1	ECQM1H102KZ	C:FXD FLM	1000PF 10% 50V
C 1804	1	ECQM1H473KV	C:FXD FLM	0.047UF +-10% 50V
C 1805	1	CK45B3D151KY	C:FXD CER	5KV 150PF +-20%
C 1807	1	CK45E3D472KY	C:FXD CER	2KV 4700PF +-20%
C 1808	1	CK45E3D472KY	C:FXD CER	2KV 4700PF +-20%
C 1809	1	CK45E3D472KY	C:FXD CER	2KV 4700PF +-20%
C 1810	1	CK45E3D472KY	C:FXD CER	2KV 4700PF +-20%
C 1811	1	CK45E3D472KY	C:FXD CER	2KV 4700PF +-20%
C 1812	1	CK45E3D472KY	C:FXD CER	2KV 4700PF +-20%
C 1813	1	CK45E3D472KY	C:FXD CER	2KV 4700PF +-20%
C 1814	1	CK45E3D472KY	C:FXD CER	2KV 4700PF +-20%
C 1815	1	ECKW2H103PE8	C:FXD CER HI-K	10000PF +100-0% 500V
C 1830	1	ECKW2H103PE8	C:FXD CER HI-K	10000PF +100-0% 500V
C 1846	1	ECCF1H470KC	C:FXD CER TC	47PF +-10% 50V NPO
C 1851	1	ECKW2H103PE8	C:FXD CER HI-K	10000PF +100-0% 500V
C 1852	1	ECKW2H103PE8	C:FXD CER HI-K	10000PF +100-0% 500V
C 1855	1	ECCD2H020CC	C:FXD CER TC	2PF +-0.25PF 500V NPO
C 1856	1	ECCD2H010CC	C:FXD CER TC	1PF +-0.25PF 500V NPO
C 1857	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 1859	1	ECKW2H103PE8	C:FXD CER HI-K	10000PF +100-0% 500V
C 1901	1	CFX22E104M	CONNECTOR:PIN	
C 1902	1	CFX22E104M	CONNECTOR:PIN	
C 1903	1	ECKDHS222MD	C:FXD CER HI-K	2200PF +-20% 400V
C 1904	1	ECKDHS222MD	C:FXD CER HI-K	2200PF +-20% 400V
C 1905	1	ECKDHS222MD	C:FXD CER HI-K	2200PF +-20% 400V
C 1906	1	ECES2DU221E	C:FXD AL ELECT	200V 220UF +-20%
C 1907	1	ECES2DU221E	C:FXD AL ELECT	200V 220UF +-20%
C 1910	1	ECEA1CG221S	C:FXD AL ELECT	220UF +-20% 16V
C 1911	1	ECEA1CG221S	C:FXD AL ELECT	220UF +-20% 16V
C 1912	1	ECKW2H103PE8	C:FXD CER HI-K	10000PF +100-0% 500V
C 1914	1	ECKD3F151KBN	C:FXD CER HI-K	150PF +-20% 3KV
C 1915	1	ECKF1H222MD	C:FXD CER HI-K	2200PF +-20% 50V
C 1920	1	ECEA1HG010S	C:FXD AL ELECT	1UF +-20% 50V
C 1921	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 1923	1	ECEA1HN010S	C:FXD AL ELECT	1UF +-20% 50V
C 1925	1	ECKR1H103ZF	C:FXD CER HI-K	10000PF +80% -20% 50
C 1926	1	ECEA2CG100S	C:FXD AL ELECT	10UF +-20% 160V
C 1927	1	ECEA2CG101S	C:FXD AL ELECT	
C 1928	1	ECEA2CG101S	C:FXD AL ELECT	

P5516A POWER & HV DWG NO 4G206715-1

REF NO	QTY	PARTS NO	DESCRIPTION	
C 1929	1	ECEA2CG101S	C:FXD AL ELECT	
C 1930	1	ECEA2CG101S	C:FXD AL ELECT	
C 1931	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 1932	1	ECEA1HG100S	C:FXD AL ELECT	10UF +-20% 50V
C 1933	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 1934	1	ECEA1CG102S	C:FXD AL ELECT	16V 100UF +-20%
C 1935	1	ECEA1CG102S	C:FXD AL ELECT	16V 100UF +-20%
C 1936	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 1937	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 1938	1	ECEA1CG102S	C:FXD AL ELECT	16V 100UF +-20%
C 1939	1	ECEA1CG102S	C:FXD AL ELECT	16V 100UF +-20%
C 1940	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 1941	1	ECEA1CKS100	C:FXD AL ELECT	10UF +-20% 16V
C 1942	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 1943	1	ECKR1H102KB	C:FXD CER HI-K	1000PF +-10% 50V B
C 1944	1	ECEA1AG102S	C:FXD AL ELECT	10V 1000UF +-20%
C 1945	1	ECEA1AG102S	C:FXD AL ELECT	10V 1000UF +-20%
CR 1805	1	ESJA58-06	DIODE	6KV
CR 1811	1	1SS83TP	DIODE:SWITCHING	200MA 250V
CR 1812	1	1SS83TP	DIODE:SWITCHING	200MA 250V
CR 1816	1	1SS83TP	DIODE:SWITCHING	200MA 250V
CR 1817	1	1SS83TP	DIODE:SWITCHING	200MA 250V
CR 1840	1	MA156	DIODE:SI	DUAL 40V 100MA M-PACK
CR 1851	1	MA150TA	DIODE:SI	100MA 35V
CR 1852	1	1SS83TP	DIODE:SWITCHING	200MA 250V
CR 1855	1	MA162	DIODE:SI	100MA 75V
CR 1856	1	MA162	DIODE:SI	100MA 75V
CR 1858	1	RD3.9EB2	DIODE:ZENER	3.7V 500MW
CR 1901	1	S1RBA60F	DIODE:PWR RECT	1A 600V
CR 1908	1	AC03FGM-R	TRIAC	600V 3A
CR 1910	1	V06E	DIODE:PWR RECT	1.1A 600V
CR 1911	1	V06E	DIODE:PWR RECT	1.1A 600V
CR 1917	1	ERA22-08	DIODE:SI	
CR 1920	1	MA165TA	DIODE	75V 100MA
CR 1925	1	ERA22-08	DIODE:SI	
CR 1926	1	ERA22-08	DIODE:SI	
CR 1927	1	ERA22-08	DIODE:SI	
CR 1929	1	MA165TA	DIODE	75V 100MA
CR 1930	1	RD36EB3	DIODE:ZENER	34.5V 500MW
CR 1933	1	ESAB92M-02	DIODE:SCHOTTKY BARRIER	5A 180V 40NS 0.85V
CR 1935	1	MA165TA	DIODE	75V 100MA
CR 1936	1	RD9.1EB2	DIODE:ZENER	8.6V 500MW

P5516A POWER & HV DWG NO 4G206715-1

REF NO	QTY	PARTS NO	DESCRIPTION	
CR 1941	1	MA165TA	DIODE	75V 100MA
CR 1942	1	ESAB92M-02	DIODE:SCHOTTKY BARRIER	5A 180V 40NS 0.85V
CR 1943	1	ESAB92M-02	DIODE:SCHOTTKY BARRIER	5A 180V 40NS 0.85V
E	1	2G401706-3	PCB,POWER & HV	P5516A
F 1801	1	SSFR1AF007	FUSE	1A
F 1902	1	EYP-2BR126	FUSE RESUSTOR	2A 250V 129 C
J 0100	1	350210-1	CONNECTOR	PIN HEADER 3P
J 1241	1	EMCS1052M	CONNECTOR	10P STRAIGHT
J 1341	1	EMCS1052M	CONNECTOR	10P STRAIGHT
J 1441	1	EMCS0552M	CONNECTOR PIN	5PIN STRAIGHT
J 1500	1	350212-1	CONNECTOR	PIN HEADER 8P
J 1530	1	EMCS0552M	CONNECTOR PIN	5PIN STRAIGHT
J 1803	1	EMCS0552M	CONNECTOR PIN	5PIN STRAIGHT
L 1901	1	4G431421	COIL	P5516A 250V 5MH
L 1902	1	4G431421	COIL	P5516A 250V 5MH
L 1912	1	ELEH4R7KA	COIL:CHOKE	4.7UH 10%
L 1913	1	ELEH4R7KA	COIL:CHOKE	4.7UH 10%
L 1934	1	SN8D-500	SN COIL:CHOKE	2A
L 1938	1	SN8D-500	SN COIL:CHOKE	2A
L 1944	1	SN5-400	SN COIL	
MP	3	R76JKGLS18S	SUPPORT KGLS-18S:PCB	
MP	1	2G590804-0CB	HEATSINK:POWER	P5516A
MP	1	4G470914	HEATSINK:IC	P5610A TC-80A
MP	1	4G617076-1CB	HEAT SINK:H-OUT	P5512A
MP	2	4G617489-0PB	PLATE:NUT	P5610A
MP	1	4G617493-1GB	HOLDER:IC	P5610A
MP	3	4G618366-0BB	CLAMP:TR-1	P5535A
Q 1801	1	2SD1273-Q	TSTR:SI NPN	80V 2W FT 50
Q 1820	1	2SC2258	TSTR:SI NPN	PC:1W FT:100MHZ
Q 1825	1	2SA1156	TSTR:SI PNP	1W 400V FT:200MHZ
Q 1826	1	2SA1156	TSTR:SI PNP	1W 400V FT:200MHZ
Q 1840	1	2SC2901	TSTR:SI NPN	PC:600MW FT:750MHZ
Q 1847	1	2SC2901	TSTR:SI NPN	PC:600MW FT:750MHZ
Q 1852	1	2SA914-RS	TSTR:SI PNP	PC:1W FT:200MHZ
Q 1859	1	2SC2258	TSTR:SI NPN	PC:1W FT:100MHZ
Q 1934	1	2SD1273-Q	TSTR:SI NPN	80V 2W FT 50
Q 1935	1	2SD1273-Q	TSTR:SI NPN	80V 2W FT 50
Q 1950	1	2SA564A-PQ	TSTR:SI PNP	PC:250MW FT:80MHZ
Q 1951	1	2SA564A-PQ	TSTR:SI PNP	PC:250MW FT:80MHZ

P5516A POWER & HV DWG NO 4G206715-1

REF NO	QTY	PARTS NO	DESCRIPTION	
R 1803	1	ERX1SJ2R2	R:FXD MET FLM	2.2 OHM 5% 1W
R 1804	1	ERDS2TJ154T	R:FXD CARBON	150K OHM 5% 1/4W
R 1808	1	ERDS2TJ181T	R:FXD CARBON	180 OHM 5% 1/4W
R 1809	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 1811	1	ERR-1SS101	R HV3	2KV +-2%
R 1812	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 1814	1	ERDS2TJ474T	R:FXD CARBON	470K OHM 5% 1/4W
R 1815	1	ERDS2TJ103T	R:FXD CARBON	10K OHM 5% 1/4W
R 1816	1	ERC14GJ226	R:FXD COMP	22M OHM +-5% 1/4W
R 1817	1	ERDS2TJ122T	R:FXD CARBON	1.2K OHM 5% 1/4W
R 1820	1	ERDS2TJ225T	R:FXD CARBON	2.2M OHM 5% 1/4W
R 1821	1	ERDS2TJ154T	R:FXD CARBON	150K OHM 5% 1/4W
R 1822	1	ERR-4GS101	R HV1	2KV +-5%
R 1823	1	ERR-2GS101	R HV2	2KV +-2%
R 1824	1	EROS2TKF1873	R:FXD MET FLM	187K OHM 1% 1/4W
R 1825	1	ERDS2TJ333T	R:FXD CARBON	33K OHM 5% 1/4W
R 1826	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 1827	1	ERDS2TJ513T	R:FXD CARBON	51K OHM 5% 1/4W
R 1828	1	PK502H104V0	R:VAR CERMET	100K OHM 20% 1/2W
R 1829	1	PK502H503V0	R:VAR CERMET	50K OHM 20% 1/2W
R 1830	1	PK502H104V0	R:VAR CERMET	100K OHM 20% 1/2W
R 1840	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 1842	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 1843	1	ERDS2TJ822T	R:FXD CARBON	8.2K OHM 5% 1/4W
R 1845	1	ERDS2TJ332T	R:FXD CARBON	3.3K OHM 5% 1/4W
R 1846	1	ERDS2TJ681T	R:FXD CARBON	680 OHM 5% 1/4W
R 1850	1	ERDS2TJ821T	R:FXD CARBON	820 OHM 5% 1/4W
R 1851	1	ERDS2TJ152T	R:FXD CARBON	1.5K OHM 5% 1/4W
R 1852	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W
R 1853	1	ERDS2TJ753T	R:FXD CARBON	75K OHM 5% 1/4W
R 1854	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 1855	1	EROS2TKF3012	R:FXD MET FLM	30.1K OHM 1% 1/4W
R 1856	1	EROS2TKF3012	R:FXD MET FLM	30.1K OHM 1% 1/4W
R 1857	1	ERDS2TJ820T	R:FXD CARBON	82 OHM 5% 1/4W
R 1858	1	ERDS2TJ681T	R:FXD CARBON	680 OHM 5% 1/4W
R 1859	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 1901	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 1902	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 1903	1	ERG1SJ473	R:FXD MET OXD	47K OHM 5%1W
R 1904	1	ERG1SJ473	R:FXD MET OXD	47K OHM 5%1W
R 1905	1	ERDS2TJ105T	R:FXD CARBON	1M OHM 5% 1/4W
R 1906	1	ERDS2TJ105T	R:FXD CARBON	1M OHM 5% 1/4W

P5516A POWER & HV DWG NO 4G206715-1

REF NO	QTY	PARTS NO	DESCRIPTION	
R 1907	1	ERG3SJ100	R:FXD MET OXD	10 OHM +-5% 3W
R 1908	1	ERDS2TJ221T	R:FXD CARBON	220 OHM 5% 1/4W
R 1909	1	ERDS1TJ105T	R:FXD CARBON	1M OHM 5% 1/2W
R 1910	1	ERDS2TJ123T	R:FXD CARBON	12K OHM 5% 1/4W
R 1911	1	ERG3SJ472	R:FXD MET OXD	4.7K OHM +-5% 3W
R 1912	1	ERG2SJ104	R:FXD MET OXD	100K OHM 2% 2W
R 1913	1	ERG2SJ104	R:FXD MET OXD	100K OHM 2% 2W
R 1914	1	ERDS2TJ152T	R:FXD CARBON	1.5K OHM 5% 1/4W
R 1915	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 1916	1	ERG3SJ220	R:FXD MET OXD	22 OHM +-5% 3W
R 1917	1	ERX3SJ1R0	R:FXD MET OXD	1 OHM +-5% 3W
R 1918	1	ERDS1TJ224T	R:FXD CARBON	220K OHM 5% 1/2W
R 1919	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 1920	1	ERDS2TJ392T	R:FXD CARBON	3.9K OHM 5% 1/4W
R 1921	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1922	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 1923	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 1924	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 1925	1	ERDS2TJ104T	R:FXD CARBON	100K OHM 5% 1/4W
R 1926	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 1927	1	ERG1SJ470	R FXD MET OXD	47 OHM +-5% 1W
R 1928	1	ERDS2TJ100T	R:FXD CARBON	10 OHM 5% 1/4W
R 1929	1	ERG1SJ220	R:FXD MET OXD	22 OHM +-5% 1W
R 1930	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1931	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1932	1	ERDS2TJ472T	R:FXD CARBON	4.7K OHM 5% 1/4W
R 1933	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 1934	1	EROS2TKF4022	R:FXD MET FLM	40.2K OHM 1% 1/4W
R 1935	1	ERDS2TJ331T	R:FXD CARBON	330 OHM 5% 1/4W
R 1936	1	ERDS2TJ470T	R:FXD CARBON	47 OHM 5% 1/4W
R 1937	1	ERDS2TJ101T	R:FXD CARBON	100 OHM 5% 1/4W
R 1938	1	ERDS2TJ222T	R:FXD CARBON	2.2K OHM 5% 1/4W
R 1939	1	EROS2TKF8661	R:FXD MET FLM	8.66K OHM 1% 1/4W
R 1940	1	PK502H301V0	R:VAR CERMET	300 OHM 20% 1/2W
R 1941	1	EROS2TKF2211	R:FXD MET FLM	2.21K OHM 1% 1/4W
R 1942	1	EROS2TKF4120	R:FXD MET FLM	412 OHM 1% 1/4W
R 1943	1	EROS2TKF8661	R:FXD MET FLM	8.66K OHM 1% 1/4W
R 1944	1	EROS2TKF8661	R:FXD MET FLM	8.66K OHM 1% 1/4W
R 1946	1	ERDS2TJ102T	R:FXD CARBON	1K OHM 5% 1/4W
R 1947	1	ERDS2TJ302T	R:FXD CARBON	3K OHM 5% 1/4W
R 1948	1	ERDS2TJ302T	R:FXD CARBON	3K OHM 5% 1/4W
R 1949	1	ERDS2TJ471T	R:FXD CARBON	470 OHM 5% 1/4W

P5516A POWER & HV DWG NO 4G206715-1

REF NO	QTY	PARTS NO	DESCRIPTION	
R 1950	1	EROS2TKF1821	R:FXD MET FLM	1.82K OHM 1% 1/4W
R 1951	1	EROS2TKF2491	R:FXD MET FLM	2.49K OHM 1% 1/4W
R 1952	1	ERDS2TJ112T	R:FXD CARBON	1.1K OHM 5% 1/4W
RT 1917	1	PC617	PHOTO COUPLER	CTR:50%
RT 1918	1	PC617	PHOTO COUPLER	CTR:50%
T 1802	1	85T02	HV TRANS	HVU-3C1021
T 1901	1	4G431447	POWER TRANS	P5516A
U 1801	1	AN1081	IC:OP AMP	SINGLE J-FET
U 1805	1	MSL4560	IC:HYBRID	3KVP-P 15KV 27UF
U 1901	1	STK7408	POWER SUPPLY	
U 1923	1	AN1081	IC:OP AMP	SINGLE J-FET
U 1931	1	AN1082	IC:OP AMP	DUAL J-FET
U 1940	1	LM337T	IC:V RGLTR	-1.2V TO -37V 1.5A
V 1815	1	BF601-00066A	LAMP:NEON	
V 1816	1	BF601-00066A	LAMP:NEON	
XV 1815	1	4G614902-0XB	HOLDER:NEON	
XV 1816	1	4G614902-0XB	HOLDER:NEON	

P5516A INPUT ATT DWG NO 4G206716-1

REF NO	QTY	PARTS NO	DESCRIPTION	
C 0011	1	ECCF1H180KC	C:FXD CER TC	18PF +-10% 50V NPO
C 0012	1	84C02	C.FXD FLM	P5530B 0.047UF 500V
C 0013	1	ECKD2H102MD	C:FXD CER HI-K	1000PF +-20% 500V
C 0014	1	ECKD2H102MD	C:FXD CER HI-K	1000PF +-20% 500V
C 0016	1	ECV1ZW10X53T	C:VAR CER	12PF-2.8PF 250V
C 0017	1	ECV1ZW02X53T	C:VAR CER	3PF-1.3PF 250V
C 0019	1	ECUV1H560JCM	C:FXD CHIP	56PF +-5% 50V NPO
C 0021	1	ECV1ZW10X53T	C:VAR CER	12PF-2.8PF 250V
C 0022	1	ECV1ZW04X53T	C:VAR CER	5.5PF-1.5PF 250V
C 0024	1	ECUV1H220JCM	C:FXD CHIP	22PF +-5% 50V NPO
C 0034	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0035	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0041	1	ECCF1H180KC	C:FXD CER TC	18PF +-10% 50V NPO
C 0042	1	84C02	C.FXD FLM	P5530B 0.047UF 500V
C 0043	1	ECKD2H102MD	C:FXD CER HI-K	1000PF +-20% 500V
C 0044	1	ECKD2H102MD	C:FXD CER HI-K	1000PF +-20% 500V
C 0046	1	ECV1ZW10X53T	C:VAR CER	12PF-2.8PF 250V
C 0047	1	ECV1ZW02X53T	C:VAR CER	3PF-1.3PF 250V
C 0049	1	ECUV1H560JCM	C:FXD CHIP	56PF +-5% 50V NPO
C 0051	1	ECV1ZW10X53T	C:VAR CER	12PF-2.8PF 250V
C 0052	1	ECV1ZW04X53T	C:VAR CER	5.5PF-1.5PF 250V
C 0054	1	ECUV1H220JCM	C:FXD CHIP	22PF +-5% 50V NPO
C 0064	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
C 0065	1	ECEA1CKS100E	C:FXD AL ELECT	10UF +-20% 16V
CR 0013	1	1SS181-TL	DIODE:SI	30MA UHF MIXER
CR 0014	1	1SS181-TL	DIODE:SI	30MA UHF MIXER
CR 0015	1	1SS181-TL	DIODE:SI	30MA UHF MIXER
CR 0017	1	1SS181-TL	DIODE:SI	30MA UHF MIXER
CR 0022	1	1SS181-TL	DIODE:SI	30MA UHF MIXER
CR 0025	1	1SS181-TL	DIODE:SI	30MA UHF MIXER
CR 0043	1	1SS181-TL	DIODE:SI	30MA UHF MIXER
CR 0044	1	1SS181-TL	DIODE:SI	30MA UHF MIXER
CR 0045	1	1SS181-TL	DIODE:SI	30MA UHF MIXER
CR 0047	1	1SS181-TL	DIODE:SI	30MA UHF MIXER
CR 0052	1	1SS181-TL	DIODE:SI	30MA UHF MIXER
CR 0055	1	1SS181-TL	DIODE:SI	30MA UHF MIXER
E		3G401736	PCB,ATT 1	P5516A
E		3G401737	PC BOARD	P5516A ATT-2
E	12	48051	CONNECTOR	PV TERMINAL (REEL TY
J	2	65039-031	CONNECTOR	LATCH HOUSING 6P
J 0011	1	84J08	CONNECTOR	BNC154

P5516A INPUT ATT DWG NO 4G206716-1

REF NO	QTY	PARTS NO	DESCRIPTION	
J 0041	1	84J08	CONNECTOR	BNC154
K 0013	1	84S10	P5610A REED SW	200V 0.5A
K 0014	1	RR-1C	REED RELARY	5V 31.3MA 30V 0.5W
K 0015	1	84S10	P5610A REED SW	200V 0.5A
K 0017	1	84S10	P5610A REED SW	200V 0.5A
K 0020	1	84S10	P5610A REED SW	200V 0.5A
K 0021	1	84S10	P5610A REED SW	200V 0.5A
K 0022	1	84S10	P5610A REED SW	200V 0.5A
K 0025	1	84S10	P5610A REED SW	200V 0.5A
K 0043	1	84S10	P5610A REED SW	200V 0.5A
K 0044	1	RR-1C	REED RELARY	5V 31.3MA 30V 0.5W
K 0045	1	84S10	P5610A REED SW	200V 0.5A
K 0047	1	84S10	P5610A REED SW	200V 0.5A
K 0050	1	84S10	P5610A REED SW	200V 0.5A
K 0051	1	84S10	P5610A REED SW	200V 0.5A
K 0052	1	84S10	P5610A REED SW	200V 0.5A
K 0055	1	84S10	P5610A REED SW	200V 0.5A
L 0013	1	84L101	COIL:FXD	P5610A
L 0015	1	84L101	COIL:FXD	P5610A
L 0017	1	84L101	COIL:FXD	P5610A
L 0020	1	84L101	COIL:FXD	P5610A
L 0021	1	84L101	COIL:FXD	P5610A
L 0022	1	84L101	COIL:FXD	P5610A
L 0025	1	84L101	COIL:FXD	P5610A
L 0043	1	84L101	COIL:FXD	P5610A
L 0045	1	84L101	COIL:FXD	P5610A
L 0047	1	84L101	COIL:FXD	P5610A
L 0050	1	84L101	COIL:FXD	P5610A
L 0051	1	84L101	COIL:FXD	P5610A
L 0052	1	84L101	COIL:FXD	P5610A
L 0055	1	84L101	COIL:FXD	P5610A
MP	28	4G617490-0AB		
MP 0351	1	4G617629-2CB	SHIELD:ATTEN PC	P5610A
MP 0352	1	4G617629-2CB	SHIELD:ATTEN PC	P5610A
Q 0026	1	2SC2712BL-TL	TSTR:SI PNP	150MW FT:80MHZ
Q 0027	1	2SC2712BL-TL	TSTR:SI PNP	150MW FT:80MHZ
Q 0028	1	2SC2712BL-TL	TSTR:SI PNP	150MW FT:80MHZ
Q 0029	1	2SC2712BL-TL	TSTR:SI PNP	150MW FT:80MHZ
Q 0030	1	2SC2712BL-TL	TSTR:SI PNP	150MW FT:80MHZ
Q 0032	1	2SC2712BL-TL	TSTR:SI PNP	150MW FT:80MHZ

P5516A INPUT ATT DWG NO 4G206716-1

REF NO	QTY	PARTS NO	DESCRIPTION	
Q 0033	1	2SC2712BL-TL	TSTR:SI PNP	150MW FT:80MHZ
Q 0034	1	2SC2712BL-TL	TSTR:SI PNP	150MW FT:80MHZ
Q 0056	1	2SC2712BL-TL	TSTR:SI PNP	150MW FT:80MHZ
Q 0057	1	2SC2712BL-TL	TSTR:SI PNP	150MW FT:80MHZ
Q 0058	1	2SC2712BL-TL	TSTR:SI PNP	150MW FT:80MHZ
Q 0059	1	2SC2712BL-TL	TSTR:SI PNP	150MW FT:80MHZ
Q 0060	1	2SC2712BL-TL	TSTR:SI PNP	150MW FT:80MHZ
Q 0062	1	2SC2712BL-TL	TSTR:SI PNP	150MW FT:80MHZ
Q 0063	1	2SC2712BL-TL	TSTR:SI PNP	150MW FT:80MHZ
Q 0064	1	2SC2712BL-TL	TSTR:SI PNP	150MW FT:80MHZ
R	2	ERJ8GCYJ221V	R:FXD CHIP CARBON	220 OHM 5% 1/8W
R 0011	1	ERDS2TJ330T	R:FXD CARBON	33 OHM 5% 1/4W
R 0013	1	ERJ8GCYJ103V	R:FXD CHIP CARBON	10K OHM 5% 1/8W
R 0014	1	ERJ8GCYJ103V	R:FXD CHIP CARBON	10K OHM 5% 1/8W
R 0015	1	ERJ8GCYJ680V	R:FXD CHIP CARBON	68 OHM 5% 1/8W
R 0016	1	ERJ8GCYJ470V	R:FXD CHIP CARBON	47 OHM 5% 1/8W
R 0017	1	ERO50CKD9903	R:FXD MET FLM	990K OHM 0.5% 1/2W
R 0018	1	EROS2TKF1012	R:FXD MET FLM	10.1K OHM 1% 1/4W
R 0019	1	ERJ8GCYJ330V	R:FXD CHIP CARBON	33 OHM 5% 1/8W
R 0020	1	ERJ8GCYJ220V	R:FXD CHIP CARBON	22 OHM 5% 1/8W
R 0021	1	ERJ8GCYJ220V	R:FXD CHIP CARBON	22 OHM 5% 1/8W
R 0022	1	ERO50CKD9003	R:FXD MET FLM	900K OHM 0.5% 1/2W
R 0023	1	EROS2CHD1113	R:FXD MET FLM	111K OHM 1% 1/4W
R 0024	1	ERJ8GCYJ220V	R:FXD CHIP CARBON	22 OHM 5% 1/8W
R 0025	1	ERJ8GCYJ220V	R:FXD CHIP CARBON	22 OHM 5% 1/8W
R 0026	1	ERJ8GCYJ103V	R:FXD CHIP CARBON	10K OHM 5% 1/8W
R 0027	1	ERJ8GCYJ103V	R:FXD CHIP CARBON	10K OHM 5% 1/8W
R 0028	1	ERJ8GCYJ103V	R:FXD CHIP CARBON	10K OHM 5% 1/8W
R 0029	1	ERJ8GCYJ103V	R:FXD CHIP CARBON	10K OHM 5% 1/8W
R 0030	1	ERJ8GCYJ103V	R:FXD CHIP CARBON	10K OHM 5% 1/8W
R 0031	1	ERDS2TJ121T	R:FXD CARBON	120 OHM 5% 1/4W
R 0032	1	ERJ8GCYJ103V	R:FXD CHIP CARBON	10K OHM 5% 1/8W
R 0033	1	ERJ8GCYJ103V	R:FXD CHIP CARBON	10K OHM 5% 1/8W
R 0034	1	ERJ8GCYJ103V	R:FXD CHIP CARBON	10K OHM 5% 1/8W
R 0041	1	ERDS2TJ330T	R:FXD CARBON	33 OHM 5% 1/4W
R 0043	1	ERJ8GCYJ103V	R:FXD CHIP CARBON	10K OHM 5% 1/8W
R 0044	1	ERJ8GCYJ103V	R:FXD CHIP CARBON	10K OHM 5% 1/8W
R 0045	1	ERJ8GCYJ680V	R:FXD CHIP CARBON	68 OHM 5% 1/8W
R 0046	1	ERJ8GCYJ470V	R:FXD CHIP CARBON	47 OHM 5% 1/8W
R 0047	1	ERO50CKD9903	R:FXD MET FLM	990K OHM 0.5% 1/2W
R 0048	1	EROS2TKF1012	R:FXD MET FLM	10.1K OHM 1% 1/4W
R 0049	1	ERJ8GCYJ330V	R:FXD CHIP CARBON	33 OHM 5% 1/8W

P5516A INPUT ATT DWG NO 4G206716-1

REF NO	QTY	PARTS NO	DESCRIPTION	
R 0050	1	ERJ8GCYJ220V	R:FXD CHIP CARBON	22 OHM 5% 1/8W
R 0051	1	ERJ8GCYJ220V	R:FXD CHIP CARBON	22 OHM 5% 1/8W
R 0052	1	ERO50CKD9003	R:FXD MET FLM	900K OHM 0.5% 1/2W
R 0053	1	EROS2CHD1113	R:FXD MET FLM	111K OHM 1% 1/4W
R 0054	1	ERJ8GCYJ220V	R:FXD CHIP CARBON	22 OHM 5% 1/8W
R 0055	1	ERJ8GCYJ220V	R:FXD CHIP CARBON	22 OHM 5% 1/8W
R 0056	1	ERJ8GCYJ103V	R:FXD CHIP CARBON	10K OHM 5% 1/8W
R 0057	1	ERJ8GCYJ103V	R:FXD CHIP CARBON	10K OHM 5% 1/8W
R 0058	1	ERJ8GCYJ103V	R:FXD CHIP CARBON	10K OHM 5% 1/8W
R 0059	1	ERJ8GCYJ103V	R:FXD CHIP CARBON	10K OHM 5% 1/8W
R 0060	1	ERJ8GCYJ103V	R:FXD CHIP CARBON	10K OHM 5% 1/8W
R 0061	1	ERDS2TJ121T	R:FXD CARBON	120 OHM 5% 1/4W
R 0062	1	ERJ8GCYJ103V	R:FXD CHIP CARBON	10K OHM 5% 1/8W
R 0063	1	ERJ8GCYJ103V	R:FXD CHIP CARBON	10K OHM 5% 1/8W
R 0064	1	ERJ8GCYJ103V	R:FXD CHIP CARBON	10K OHM 5% 1/8W
RT 0031	1	ERTD2FGL750S	TERMISTOR	75 OHM 15%
RT 0061	1	ERTD2FGL750S	TERMISTOR	75 OHM 15%

P5516A CABLE ACCESSORY DWG NO 4G206783

REF NO	QTY	PARTS NO	DESCRIPTION	
DS	1	BQ041-23303A	LAMP:INCD	6V 0.2A
E	2	Q057M-88W02	10:1 PROBE 1.5M	
F	2	DUH1.6AT	FUSE : UL,DENTORI	1.6A 250V 20MM
J	1	CM32	CONNECTOR	PWR JACK 3P
P	1	1182-1276-2M	CABLE:PWR (DENTORI)	125V 7A

P5516A MECHA:MAIN FRAME DWG NO 4G304817-1

REF NO	QTY	PARTS NO	DESCRIPTION	
MP		R54H97-515	SPRING STICK FN	
MP	1	1G590520-1WB	CHASSIS:MAIN	P5516A
MP	1	1G660512-0AF	FRAME,FRONT	P5516A
MP	1	2G580910-1FH		
MP	1	2G590805-0WB	CHASSIS:POWER	P5516A
MP	1	2G590807-1CB	FRAME,UPPER-LH	P5516A
MP	1	2G590808-1CB	FRAME,UPPER-RH	P5516A
MP	1	2G590809-0EB	FRAME:POWER	P5516A
MP	1	2G630723-2AA	PANEL,FRONT-RH	P5516A
MP	1	3G614286-2AB	PLATE:KEY TOP	P5516A
MP	1	3G614287-0DB	SUPPORT:CRT HLD	P5516A
MP	2	3G710402-0N	BAG PACKING	P9551A
MP	1	3G760635-0C	*PUSHBUTTON,7X7	GREEN:PWR
MP	2	3G760646-0C	*PUSHBUTTON,5X6	GREEN
MP	4	3G760648-0G	*FOOT,REAR	
MP	1	3G760679-0H	SHAFT:POWER	P5516A
MP	3	3G760681-0C	*KNOB,10KN6DF	
MP	4	3G760682-0C	*KNOB,14KD8LF	
MP	7	3G760683-0C	*KNOB,12KN6LF	
MP	4	3G760684-0C	*KNOB,10KN6LF	
MP	3	3G760685-0C	*KNOB,20KN6LF	
MP	5	3G760686-0C	*KEY TOP:QS2	LIGHT GRAY
MP	36	3G760687-0C	*KEY TOP:QS2	IVORY
MP	1	4G540024-0B	SPRING	P385B
MP	1	4G540129-2FB	SPRING:GRD-B	P5520A
MP	1	4G540700-1P	PAD:CRT	P5516A
MP	1	4G601516-0W	TERMINAL-F:GRD	
MP	1	4G615528-2XB	BAND:CRT	P5503A
MP	1	4G618424-0AB	SUPPORTER:CRT	P5516A
MP	2	4G618429-0DB	SUPPORT:SWP PCB	P5516A
MP	1	4G634195-0J	LABEL	PROTECTIVE EARTH
MP	1	4G644156-2BB	3X25	STUD
MP	6	4G644651-0BB	STUD:M3-20	0.5MM
MP	1	4G650537-0M	SHIELD:CRT	P5610A
MP	1	4G702880-0G	BLIND:LIGHT	P5516A
MP	1	4G712648-0N	BAG:PACKING	Q056 PLAIN
MP	1	4G712649-0N	BAG:ACCESSORY	PLAIN
MP	2	4G760170-1X	RUBBER,HLDR	P5503A CRT-A
MP	1	4G760171-1X	RUBBER,HLDR	P5503A CRT-B
MP	1	4G780525-0N	GUARD:CRT	P5231A

P5516A MECHA:ESCUTCHEON DWG NO 4G304818

REF NO	QTY	PARTS NO	DESCRIPTION	
MP	1	1G760571-0A	ESCUTCHEON	P5516A
MP	1	3G631383-0AA	PANEL,FRONT:CRT	P5516A
MP	1	4G530513-2K	FILTER:CRT	P5220A
MP	1	4G540564-0F	SPRING:FILTER	P5512A
MP	4	4G618420-0BB	BRACKET:ESC	5516A
MP	1	4G634927-1W	LABEL:IDENT	P5516A

P5516A MECHA:ATTEN ASSY DWG NO 4G304819

REF NO	QTY	PARTS NO	DESCRIPTION	
MP	1	A66E-85M04	SUPPORT:ATTEN	P5610A
MP	1	3G614165-1WB	COVER:ATTEN	P5610A
MP	1	4G617513-0EB	BRACKET:ATTEN	P5610A PCB
MP	1	4G617724-0W	SHIELD:ATT BNC	P5610A
MP	1	4G618423-0CB	PLATE,GRD-ATTEN	P5516A

P5516A MECHA:COVER ASSY DWG NO 4G304820

REF NO	QTY	PARTS NO	DESCRIPTION	
MP	2	A55K87M39	HANDLE STOPPER	
MP	2	R55K-87M02	MOUNT:ADAPTER	
MP	4	R76G-992	FOOT-992	
MP	1	2G550504-0J	HANDLE ASSY	P3665A
MP	1	2G580908-1CF	COVER,UPPER	P5516A
MP	1	2G580909-0AF	COVER,LOWER	P5516A
MP	1	3G670573-0K	HANDLE-K	P5512A

P5516A PACKAGING DWG NO 4G304821

REF NO	QTY	PARTS NO	DESCRIPTION	
MP	1	1G710511-0E	CUSHION,FRONT	KP-585
MP	1	1G710512-0E	CUSHION,REAR	KP-585
MP	1	4G712963-0A	CARTON BOX	KP-585
MP	1	585SP0P5516A	P5516A PACKING KIT	

VP-5516A CIRCUIT DIAGRAMS

OVERALL INTERCONNECTION.....⓪
CH1,CH2 ATTENUATORS.....①
CH1,CH2 V PRE AMP.....②
CH3,CH4 V PRE AMP.....③
DELAY LINE DRIVER.....④
INTERNAL TRIG AMP.....⑤
SIGNAL OUT & PEAK SIG.....⑥
V.MODE.....⑦
V.MAIN.....⑧
TRIGGER AMP.....⑨
A.B SWEEP.....⑩
A & B TIMING.....⑪
HORIZONTAL AMP.....⑫
HV & Z AXIS.....⑬
POWER SUPPLY.....⑭
CPU CIRCUIT.....⑮
CHARACTER.....⑯
ANALOG.....⑰
PANEL.....⑱

NOTES

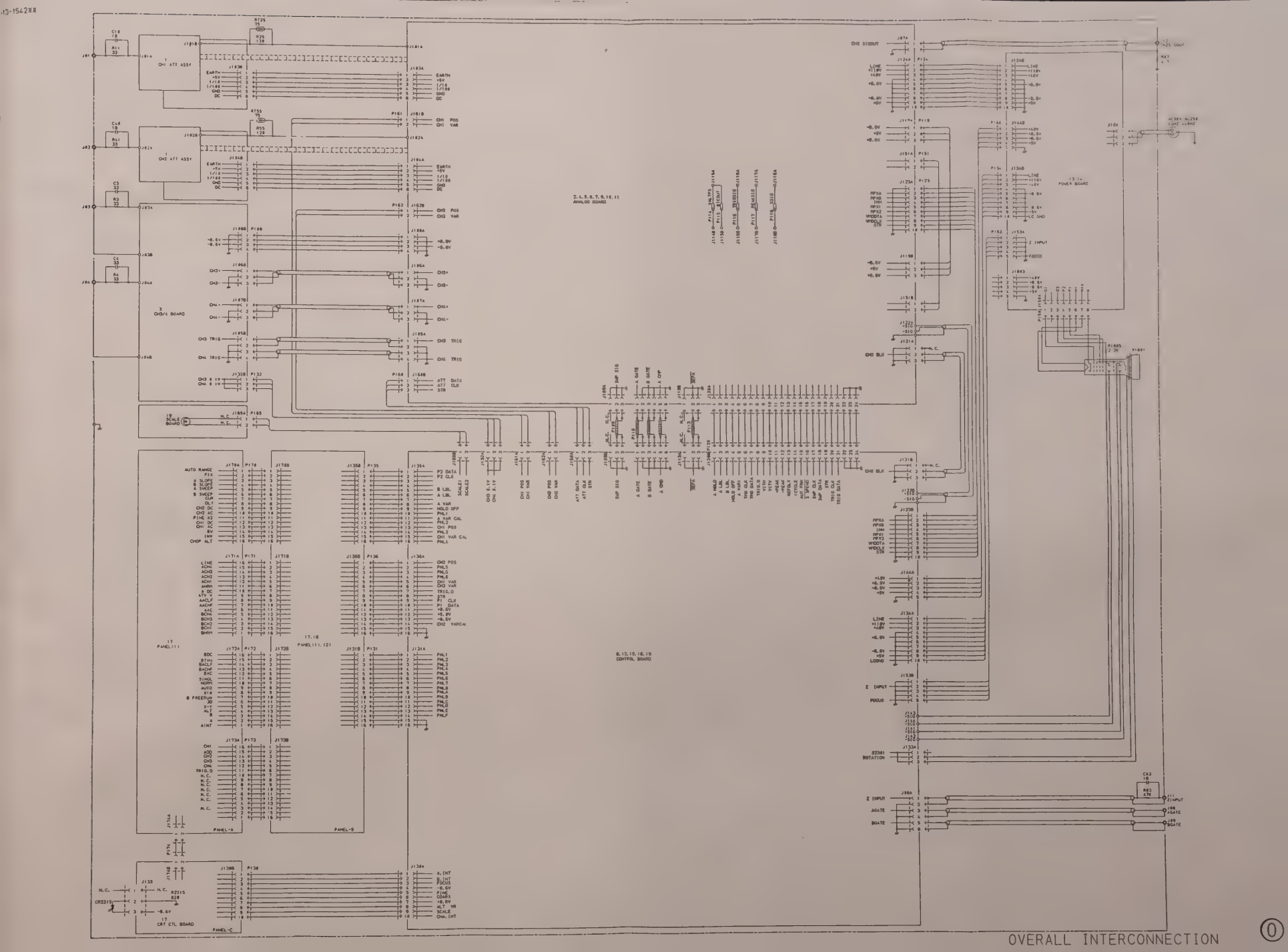
▷ WHEN THE CIRCUIT IS DIVIDED INTO SOME UNITS AND AN IDENTIFYING NUMBER IS ASSIGNED TO EACH UNIT, REFERENCE DESIGNATORS IN EACH CIRCUIT DIAGRAM ARE GIVEN IN ABBREVIATED FORM. PREFIX WITH EACH IDENTIFYING NUMBER FOR COMPLETE DESCRIPTION.
EXAMPLES: A1C1, A6R3.

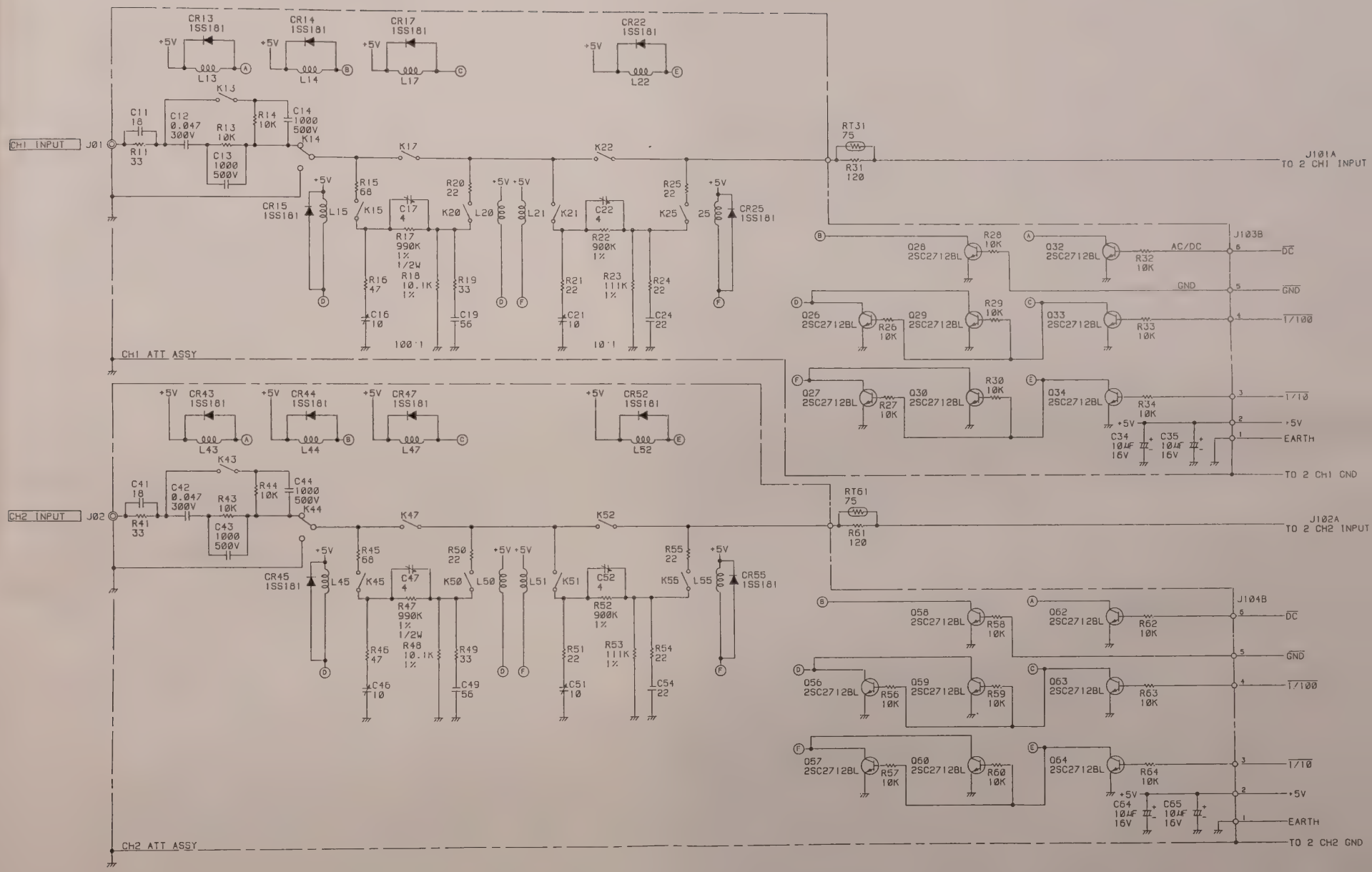
▷ RESISTANCE VALUES IN OHMS AND CAPACITANCE IN PICOFARADS(FROM 1 TO 9,999) OR MICROFARADS (FROM 0.01 TO 0.99) UNLESS OTHERWISE NOTED.

▷ POWER RATINGS AND RESISTANCE TOLERANCES OF FIXED RESISTORS ARE 1/8 WATTS AND ±5 % UNLESS OTHERWISE NOTED.

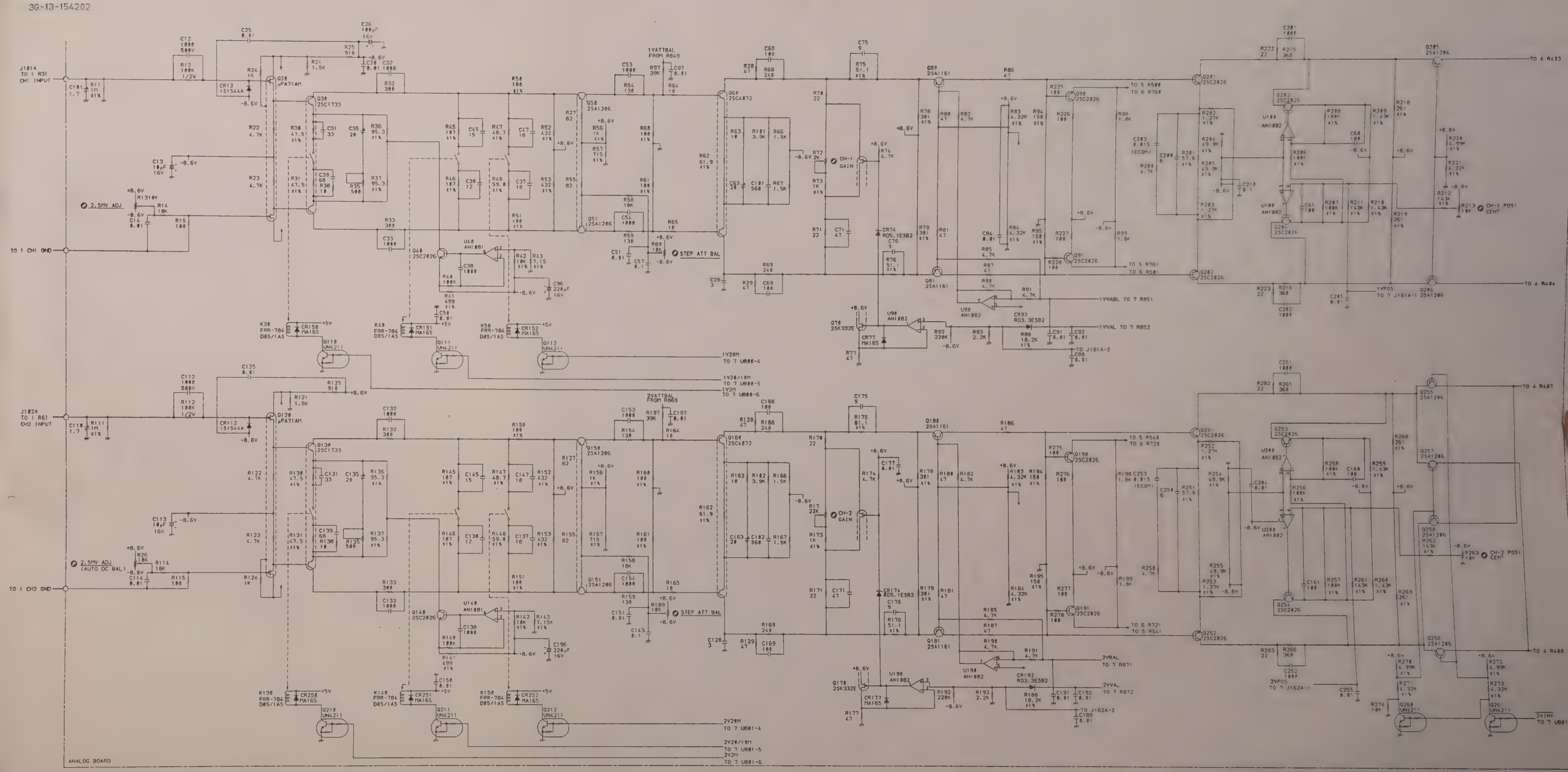
▷ ✡ FACTORY REWORKED OR CHECKED COMPONENTS.

▷ ✳ VALUE SELECTED AT FACTORY, NOMINAL VALUE SHOWN.

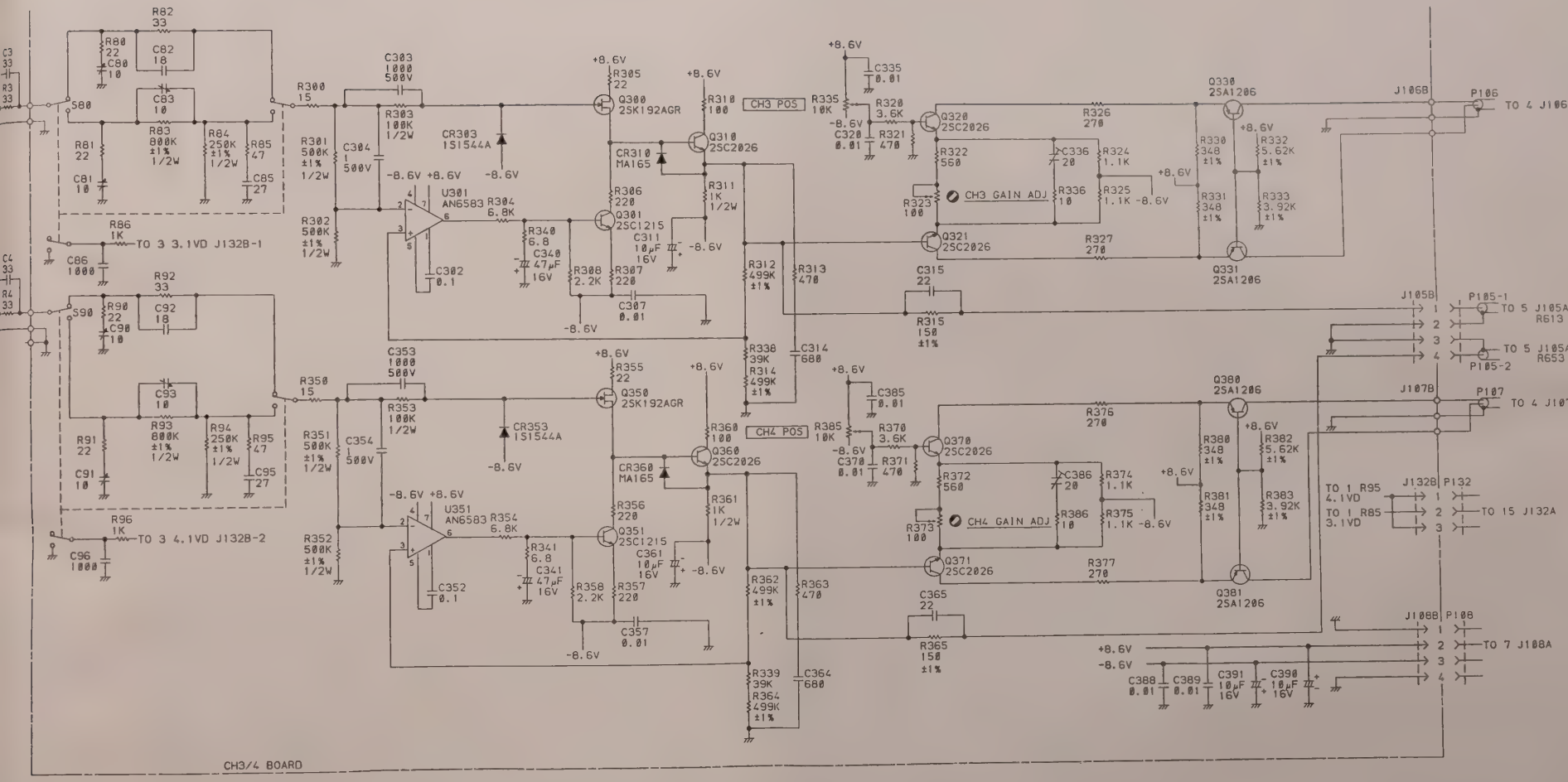

CH1 ATT ASSY
CH2 ATT ASSY
CH3/4 BOARD
SCALE BOARD
2, 4, 5, 6, 7, 9, 10, 11 ANALOG BOARD
8, 12, 15, 16, 19 CONTROL BOARD
17, 18 PANEL(11, 12)
PANEL-A
PANEL-B
PANEL-C
CRT CTL BOARD
POWER BOARD
OVERALL INTERCONNECTION



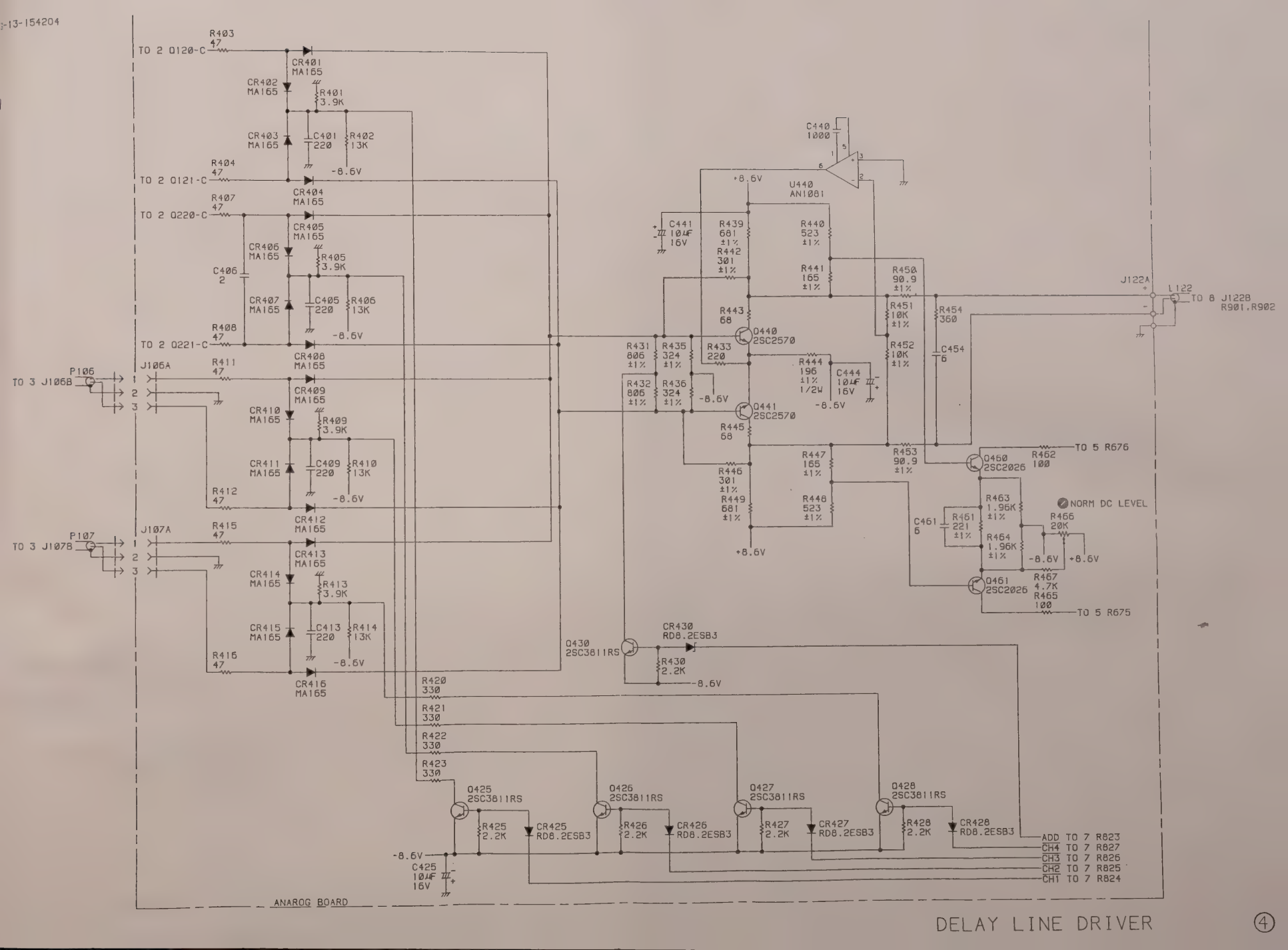
CH1, CH2 ATTENUATORS ①



CH1,CH2 V PRE AMP

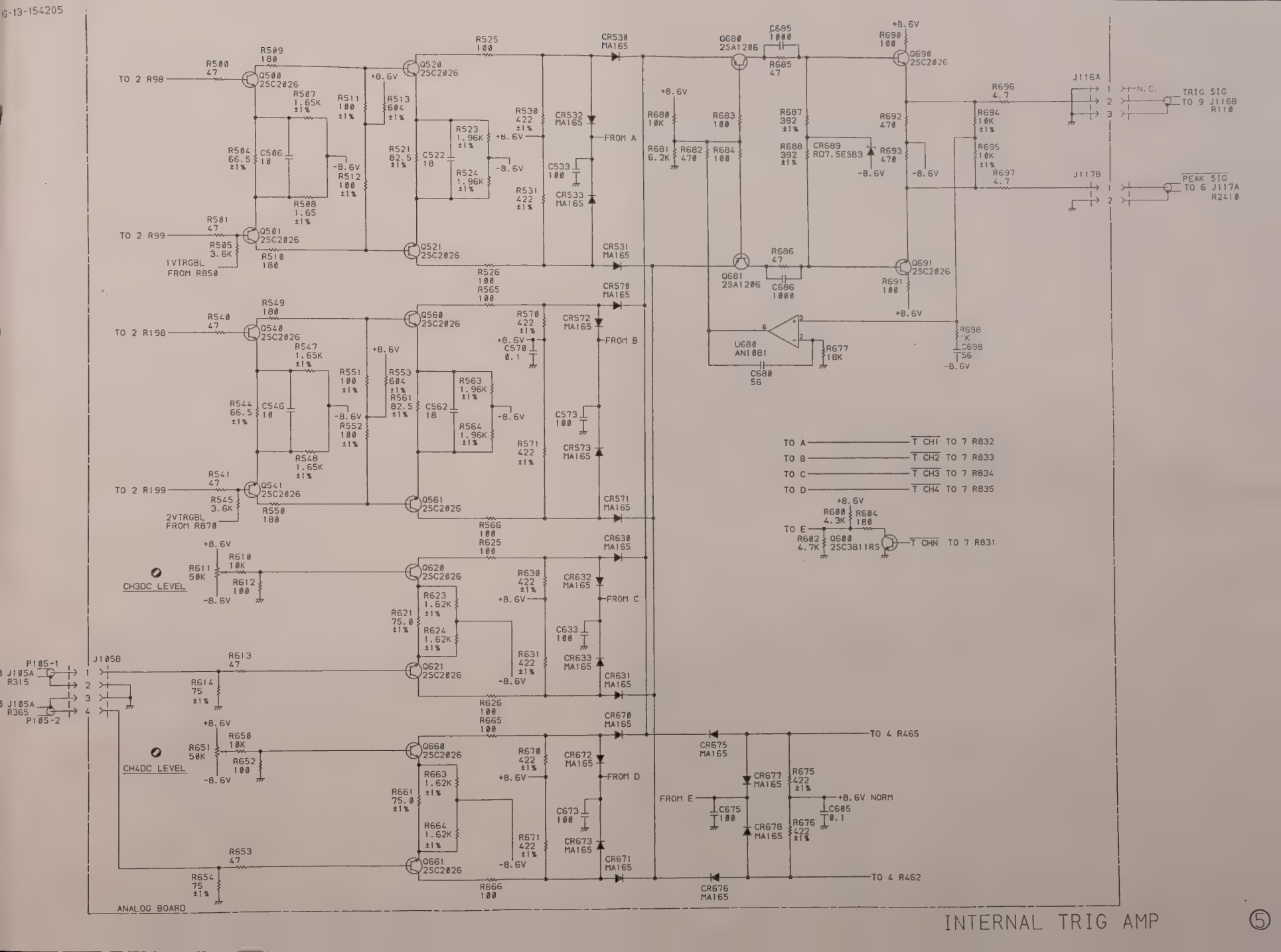


CH3,CH4,V PRE AMP ③

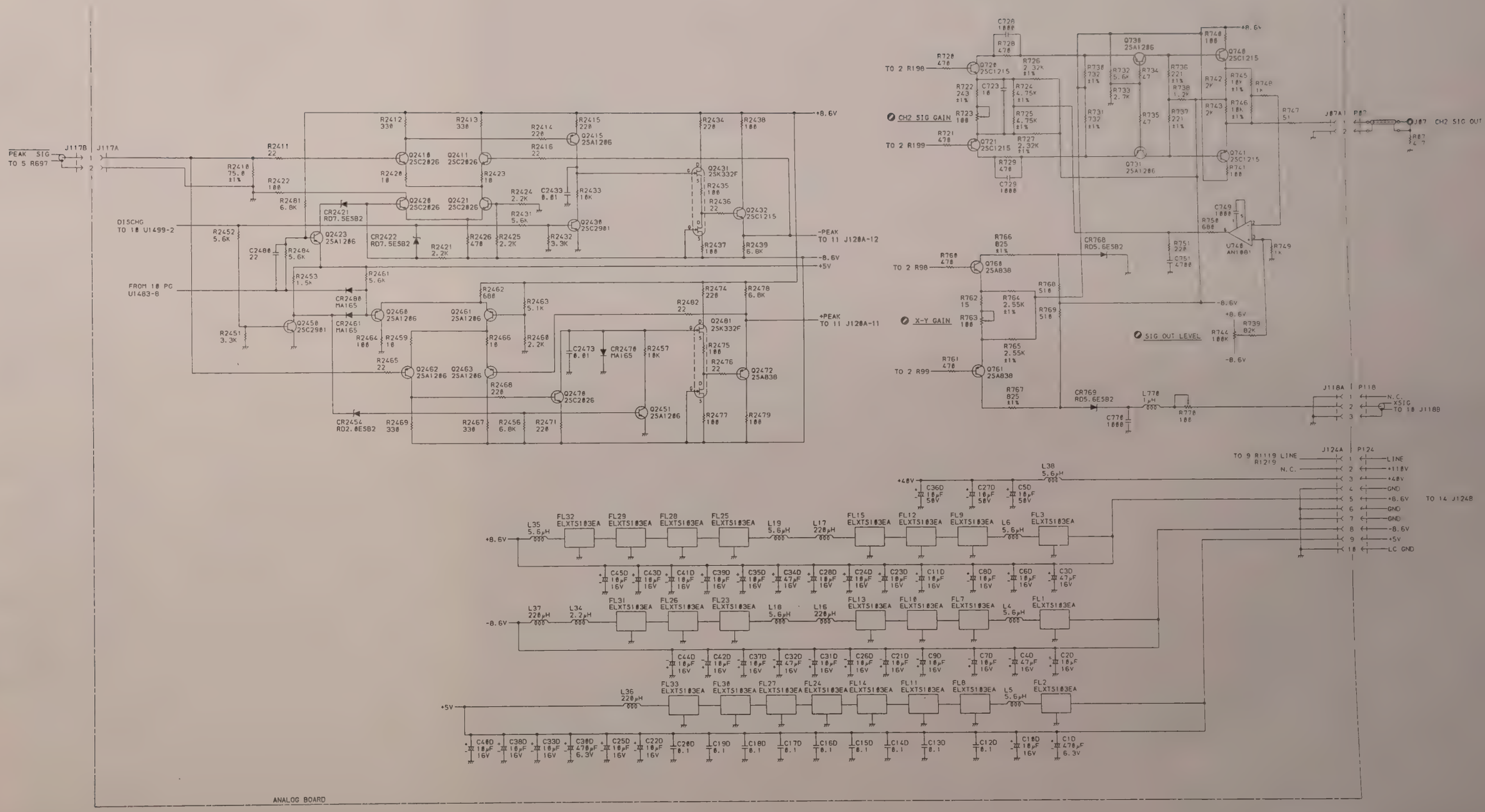


DELAY LINE DRIVER

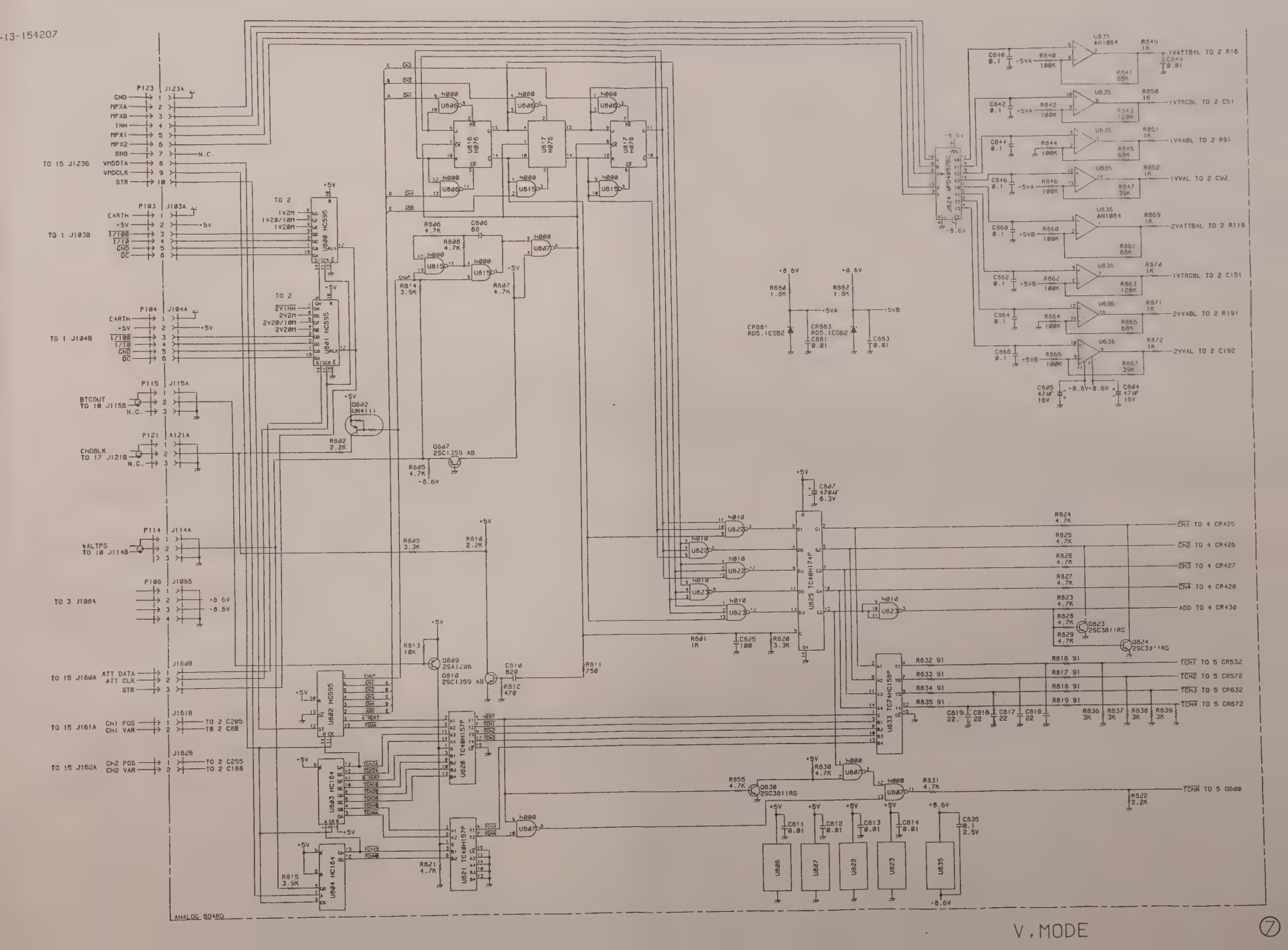
④

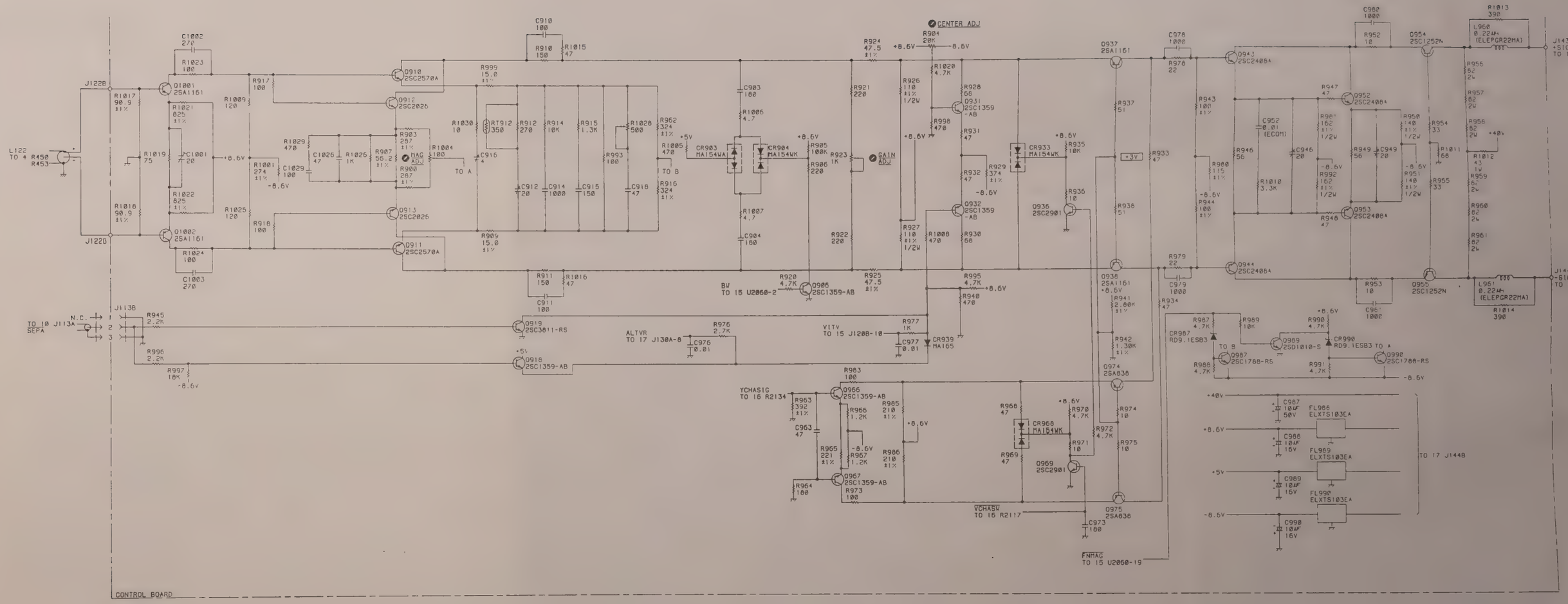


INTERNAL TRIG AMP

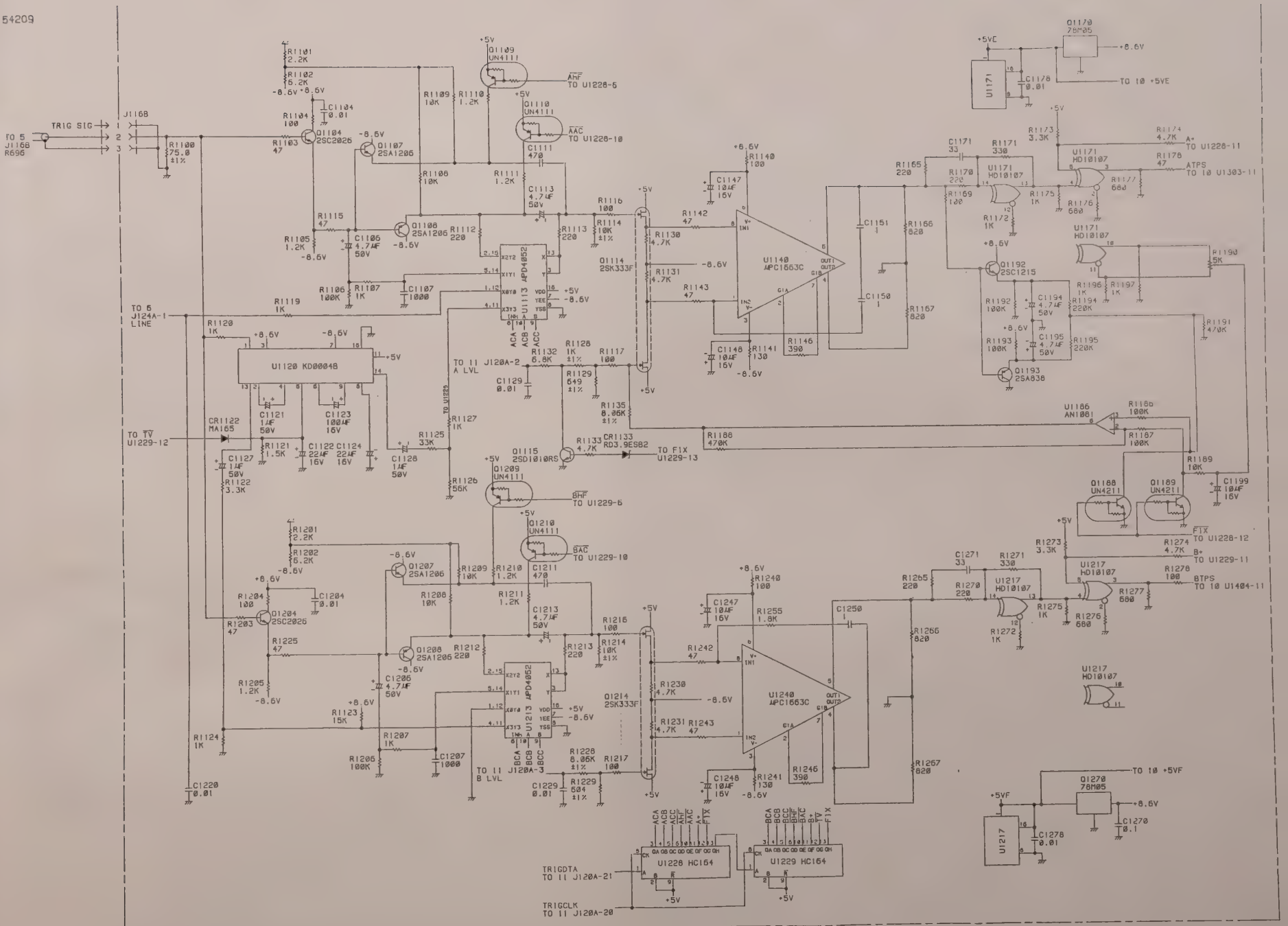


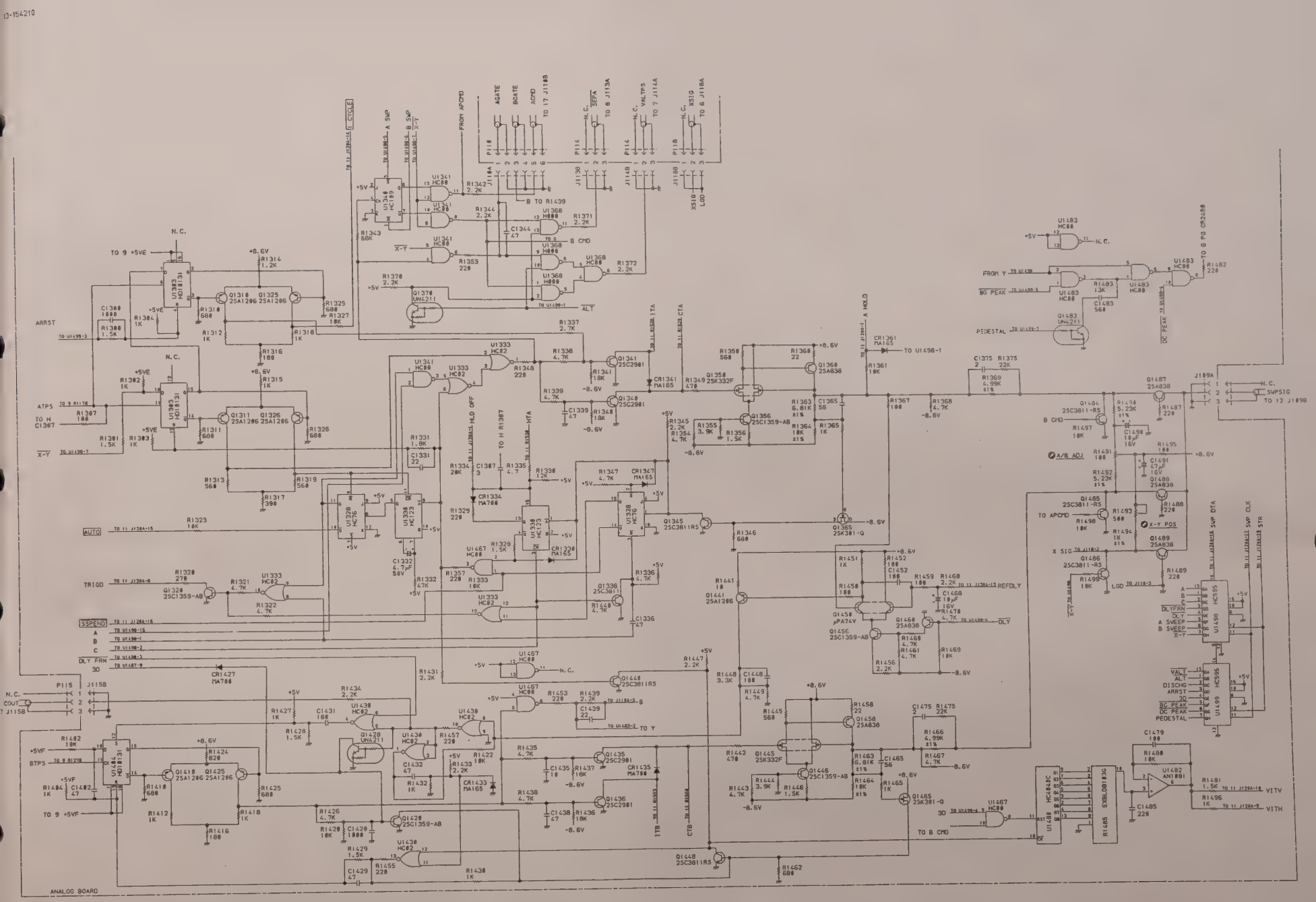
SIGNAL OUT & PEAK SIG

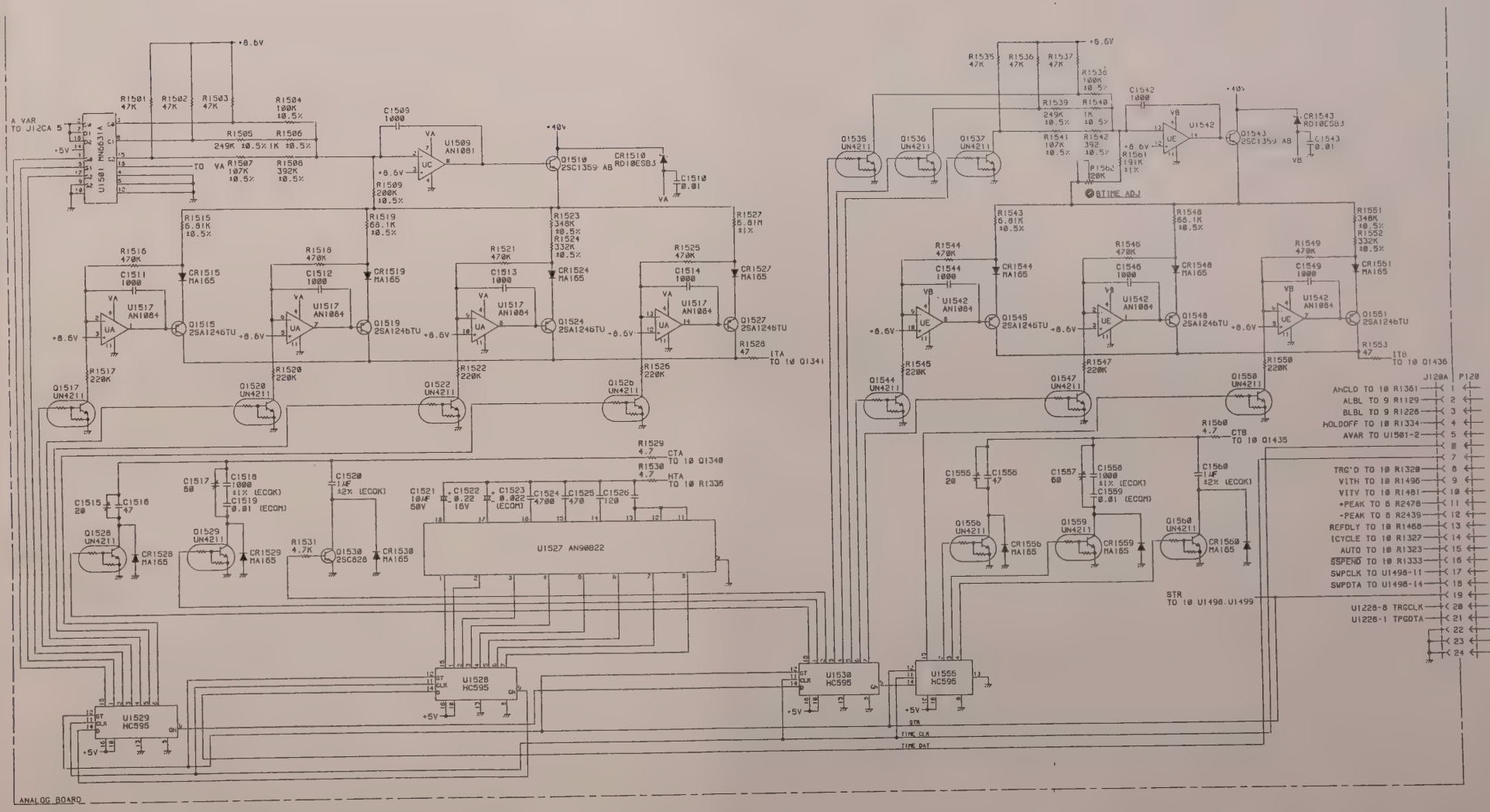

-13-154207
P123 J123A
GND
MPXA
MPXB
INH
MPX1
MPX2
BMD
VMDDTA
VMDCLK
STR
N.C.
TO 15 J1236
P103 J103A
EARTH
+5V
T/I100
T/I10
GND
OC
TO 1 J103B
P104 J104A
TO 1 J104B
P115 J115A
BTCOUT
TO 18 J115B
N.C.
P121 A121A
CHOBLK
TO 17 J121B
P114 J114A
VALTPS
TO 18 J114B
P108 J108A
TO 3 J108A
+8.6V
-8.6V
J160B
TO 15 J160A
ATT DATA
ATT CLK
STR
J161B
TO 15 J161A
CH1 POS
CH1 VAR
J162B
TO 15 J162A
CH2 POS
CH2 VAR
TO 2 C255
TO 2 C168
TO 2 C205
TO 2 C88
TO 2
1V2M
1V20/10M
1V20M
2V1NM
2V2M
2V20/10M
2V20M
U800 HC595
U801 HC595
U802 HC595
U803 HC164
U804 HC164
U816 H076
U817 H076
U821 TC40H157P
U822 TC40H157P
U825 TC40H174P
U833 TC74HC158P
U624 MPD4052BC
U835 AN1884
U836 AN1884
U837 AN1884
U838 AN1884
U839 AN1884
U806
U807
U822
U823
U835
Q602 UN4111
Q607 2SC1359 AB
Q809 2SA1206
Q810 2SC1359 AB
Q830 2SC3611RS
Q823 2SC3611RS
Q824 2SC3611RS
CR881 RD5.1ES02
CR883 RD5.1ES02
+5V
+5VA
+5VB
+8.6V
-8.6V
-5V
1VATTBAL TO 2 R116
1VTRCBL TO 2 C51
1VVABL TO 2 R91
1VVAL TO 2 C92
2VATTBAL TO 2 R116
1VTRCBL TO 2 C151
2VVABL TO 2 R191
2VVAL TO 2 C192
CH1 TO 4 CR425
CH2 TO 4 CR426
CH3 TO 4 CR427
CH4 TO 4 CR428
ADD TO 4 CR430
TCH1 TO 5 CR532
TCH2 TO 5 CR572
TCH3 TO 5 CR632
TCH4 TO 5 CR672
TCHN TO 5 C600
ANALOG BOARD
V,MODE
⑦


CONTROL BOARD
J122B
J122D
J113B
L122
TO 4 R450
R453
C1002
270
R1023
100
Q1001
2SA1161
R1017
90.9
±1%
R1021
825
±1%
R1019
75
C1001
20
R1022
825
±1%
R1018
90.9
±1%
Q1002
2SA1161
R1024
100
C1003
270
+8.6V
-8.6V
R1009
120
R1025
120
R1001
274
±1%
C1029
100
R1029
470
C1026
47
R1026
1K
R907
56.2
±1%
R903
287
±1%
MAG ADJ
R900
287
±1%
R1004
100
TO A
R917
100
R918
100
Q910
2SC2570A
Q912
2SC2026
Q913
2SC2026
Q911
2SC2570A
C910
100
R910
150
R1015
47
R999
15.0
±1%
R1030
10
RT912
350
R912
270
R914
10K
R915
1.3K
R1028
500
R962
324
±1%
R916
324
±1%
C916
4
C912
20
C914
1000
C915
150
R993
100
C918
47
R909
15.0
±1%
R911
150
R1016
47
C911
100
TO B
+5V
R1005
470
C903
180
R1006
4.7
C904
100
R1007
4.7
CR903
MA154WA
CR904
MA154WK
R905
100K
R906
220
R923
1K
GAIN ADJ
R921
220
R922
220
R924
47.5
±1%
R925
47.5
±1%
CENTER ADJ
R904
20K
R1020
4.7K
R998
470
R926
110
±1%
1/2W
R927
110
±1%
1/2W
R928
66
Q931
2SC1359
-AB
R931
47
R929
374
±1%
Q932
2SC1359
-AB
R932
47
R1008
470
R930
66
CR933
MA154WK
R935
10K
Q936
2SC2901
R936
10
R937
51
R938
51
Q937
2SA1161
Q938
2SA1161
R941
22.60K
±1%
R942
1.30K
±1%
Q974
2SA838
R974
10
R975
10
R972
4.7K
R971
10
CR968
MA154WK
R968
47
R970
4.7K
Q969
2SC2901
R969
47
Q975
2SA838
C973
100
VCHASV
TO 16 R2117
FNMAG
TO 15 U2050-19
+3V
R933
47
R934
47
C978
1000
R978
22
C979
1000
R979
22
C980
1000
R952
10
R953
10
C981
1000
Q954
2SC1252N
Q955
2SC1252N
L960
0.22μH
(ELEPGR22MA)
L961
0.22μH
(ELEPGR22MA)
R1013
390
R1014
390
J143
+SIG4
TO 13 VO1-7
J144
-SIG4
TO 13 VO1-9
Q943
2SC2408A
Q944
2SC2408A
Q952
2SC2408A
Q953
2SC2408A
R943
100
±1%
R944
100
±1%
R945
56
R946
56
R947
47
R948
47
R980
115
±1%
R981
162
±1%
1/2W
R992
162
±1%
1/2W
R950
140
±1%
1/2W
R951
140
±1%
1/2W
R949
56
R954
33
R955
33
R1011
68
C952
0.01
(ECOM)
R1010
3.3K
C946
20
C949
20
R956
82
2W
R957
82
2W
R958
82
2W
R959
82
2W
R960
82
2W
R961
82
2W
R1012
43
1W
+40V
-8.6V
R983
100
Q966
2SC1359-AB
R963
392
±1%
R966
1.2K
R985
210
±1%
C963
47
R965
221
±1%
R967
1.2K
R986
210
±1%
Q967
2SC1359-AB
R964
180
R973
100
YCHASIG
TO 16 R2134
ALTVR
TO 17 J130A-8
R976
2.7K
C976
0.01
VITV
TO 15 J1208-10
R977
1K
C977
0.01
CR939
MA165
BV
TO 15 U2050-2
R920
4.7K
Q905
2SC1359-AB
R995
4.7K
R940
470
Q919
2SC3811-RS
Q918
2SC1359-AB
R945
2.2K
R996
2.2K
R997
10K
N.C.
TO 10 J113A
SEPA
CR987
RD9.1ESB3
CR990
RD9.1ESB3
Q987
2SC1788-RS
Q990
2SC1788-RS
Q989
2SD1010-S
R987
4.7K
R988
4.7K
R989
10K
R990
4.7K
R991
4.7K
TO B
TO A
C987
10μF
50V
C988
10μF
16V
C989
10μF
16V
C990
10μF
16V
FL988
ELXTS103EA
FL989
ELXTS103EA
FL990
ELXTS103EA
TO 17 J144B

V.MAIN

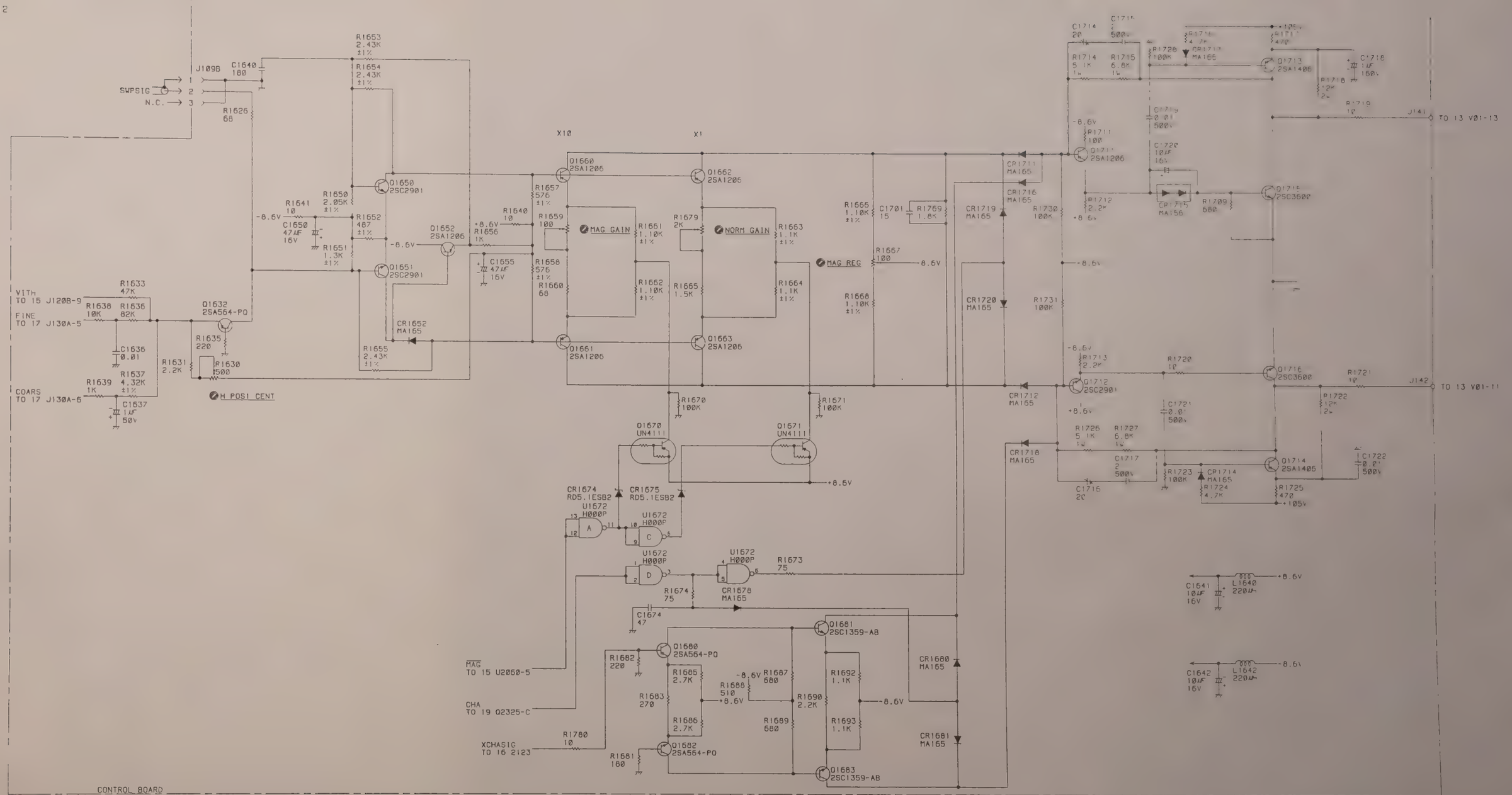

TRIG SIG
TO 5 J116B R696
J116B
TO 6 J124A-1 LINE
TO J1225
TO $\overline{TV}$ U1229-12
TO 11 J120A-2 A LVL
TO 11 J120A-3 B LVL
TRIGDTA TO 11 J120A-21
TRIGCLK TO 11 J120A-20
U1120 KD00048
U1113 APD4052
U1213 APD4052
U1140 APC1663C
U1240 APC1663C
U1226 HC164
U1229 HC164
Q1109 UN4111
Q1110 UN4111
Q1209 UN4111
Q1210 UN4111
Q1188 UN4211
Q1189 UN4211
$\overline{AHF}$ TO U1228-5
$\overline{AAC}$ TO U1228-10
$\overline{BHF}$ TO U1229-5
$\overline{BAC}$ TO U1229-10
$\overline{F1X}$ TO U1228-12
A+ TO U1228-11
ATPS TO 10 U1303-11
B+ TO U1229-11
BTPS TO 10 U1404-11
TO 10 +5VE
TO 10 +5VF
ANALOG BOARD
TRIGGER AMP
9


ANALOG BOARD
A.B SWEEP
10

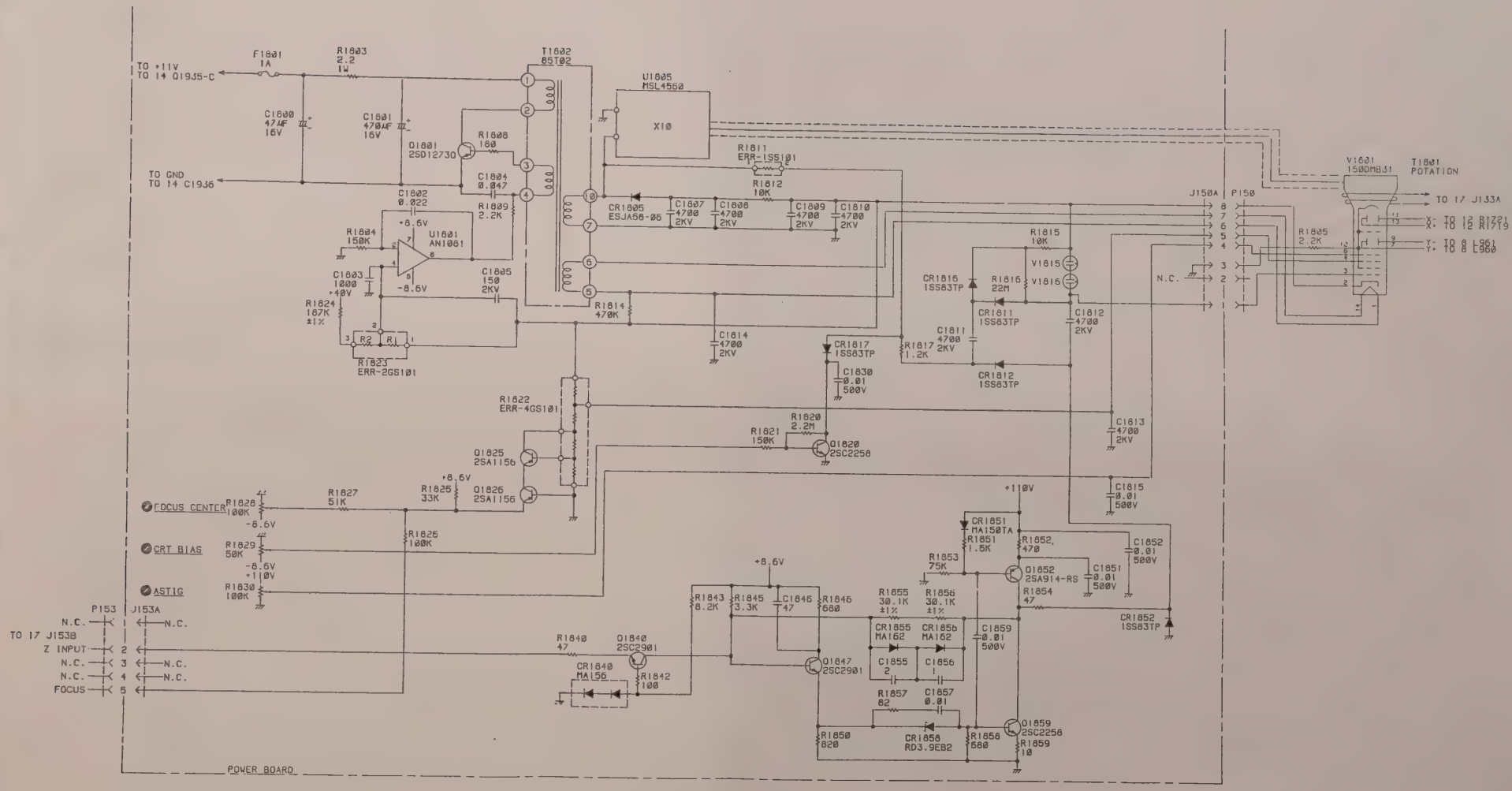

A VAR
TO J12CA 5
U1501 MN6631A
R1501 47K
R1502 47K
R1503 47K
R1504 100K ±0.5%
R1505 249K ±0.5%
R1506 1K ±0.5%
R1507 107K ±0.5%
R1508 392K ±0.5%
TO VA
+8.6V
+5V
+40V
C1509 1000
U1509 AN1081
CR1510 RD10ESB3
LC1510 0.01
R1509 200K ±0.5%
R1515 6.81K ±0.5%
R1519 68.1K ±0.5%
R1523 348K ±0.5%
R1524 332K ±0.5%
R1527 6.81M ±1%
R1516 470K
R1518 470K
R1521 470K
R1525 470K
C1511 1000
C1512 1000
C1513 1000
C1514 1000
CR1515 MA165
CR1519 MA165
CR1524 MA165
CR1527 MA165
U1517 AN1084
Q1515 2SA1246TU
Q1519 2SA1246TU
Q1524 2SA1246TU
Q1527 2SA1246TU
R1528 47
ITA
TO 10 Q1341
R1517 220K
R1520 220K
R1522 220K
R1526 220K
Q1517 UN4211
Q1520 UN4211
Q1522 UN4211
Q1526 UN4211
R1529 4.7 CTA
TO 10 Q1340
R1530 4.7 HTA
TO 10 R1335
C1515 20
C1516 47
C1517 50
C1518 1000 ±1% (ECOK)
C1519 0.01 (ECOM)
C1520 1µF ±2% (ECOK)
C1521 10µF 50V
C1522 0.22 16V
C1523 0.022 (ECOM)
C1524 4700
C1525 470
C1526 120
Q1528 UN4211
Q1529 UN4211
Q1530 2SC828
CR1528 MA165
CR1529 MA165
CR1530 MA165
R1531 4.7K
U1527 AN90822
U1528 HC595
U1529 HC595
U1530 HC595
U1555 HC595
GT
CLK
QH
STR
TIME CLK
TIME DAT
R1535 47K
R1536 47K
R1537 47K
R1538 100K ±0.5%
R1539 249K ±0.5%
R1540 1K ±0.5%
R1541 107K ±0.5%
R1542 392K ±0.5%
R1561 191K ±1%
P1562 200K
BTIME ADJ
C1542 1000
U1542
Q1543 2SC1359 AB
CR1543 RD10CSB3
LC1543 0.01
Q1535 UN4211
Q1536 UN4211
Q1537 UN4211
R1543 6.81K ±0.5%
R1544 470K
R1545 470K
R1546 470K
R1548 68.1K ±0.5%
R1549 470K
R1551 348K ±0.5%
R1552 332K ±0.5%
C1544 1000
C1546 1000
C1549 1000
CR1544 MA165
CR1548 MA165
CR1551 MA165
U1542 AN1084
Q1545 2SA1246TU
Q1548 2SA1246TU
Q1551 2SA1246TU
R1553 47
ITB
TO 10 Q1436
R1545 220K
R1547 220K
R1550 220K
Q1544 UN4211
Q1547 UN4211
Q1550 UN4211
R1560 4.7 CTB
TO 10 Q1435
C1555 20
C1556 47
C1557 60
C1558 1000 ±1% (ECOK)
C1559 0.01 (ECOM)
C1560 1µF ±2% (ECOK)
Q1556 UN4211
Q1559 UN4211
Q1560 UN4211
CR1556 MA165
CR1559 MA165
CR1560 MA165
STR
TO 10 U1498,U1499
J120A
P120
AHCLO TO 10 R1361
ALBL TO 9 R1129
BLBL TO 9 R1228
HOLDOFF TO 10 R1334
AVAR TO U1501-2
TRG'D TO 10 R1328
VITH TO 10 R1496
VITV TO 10 R1481
+PEAK TO 5 R2478
-PEAK TO 5 R2439
REFDLY TO 10 R1468
ICYCLE TO 10 R1327
AUTO TO 10 R1323
SSPEND TO 10 R1333
SWPCLK TO U1498-11
SWPDTA TO U1498-14
U1228-8 TRGCLK
U1228-1 TPGDTA
ANALOG BOARD

A&B TIMING

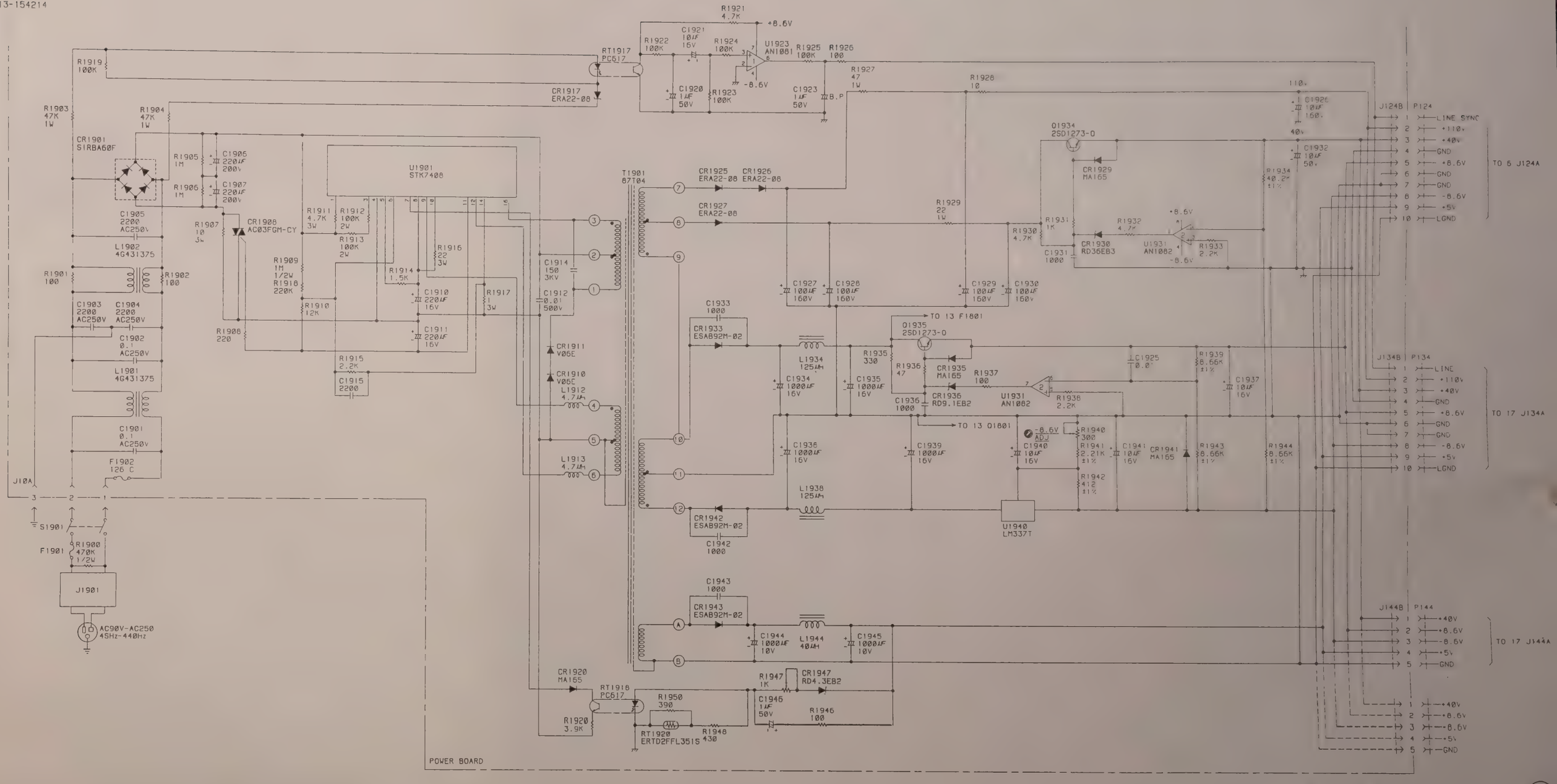
11

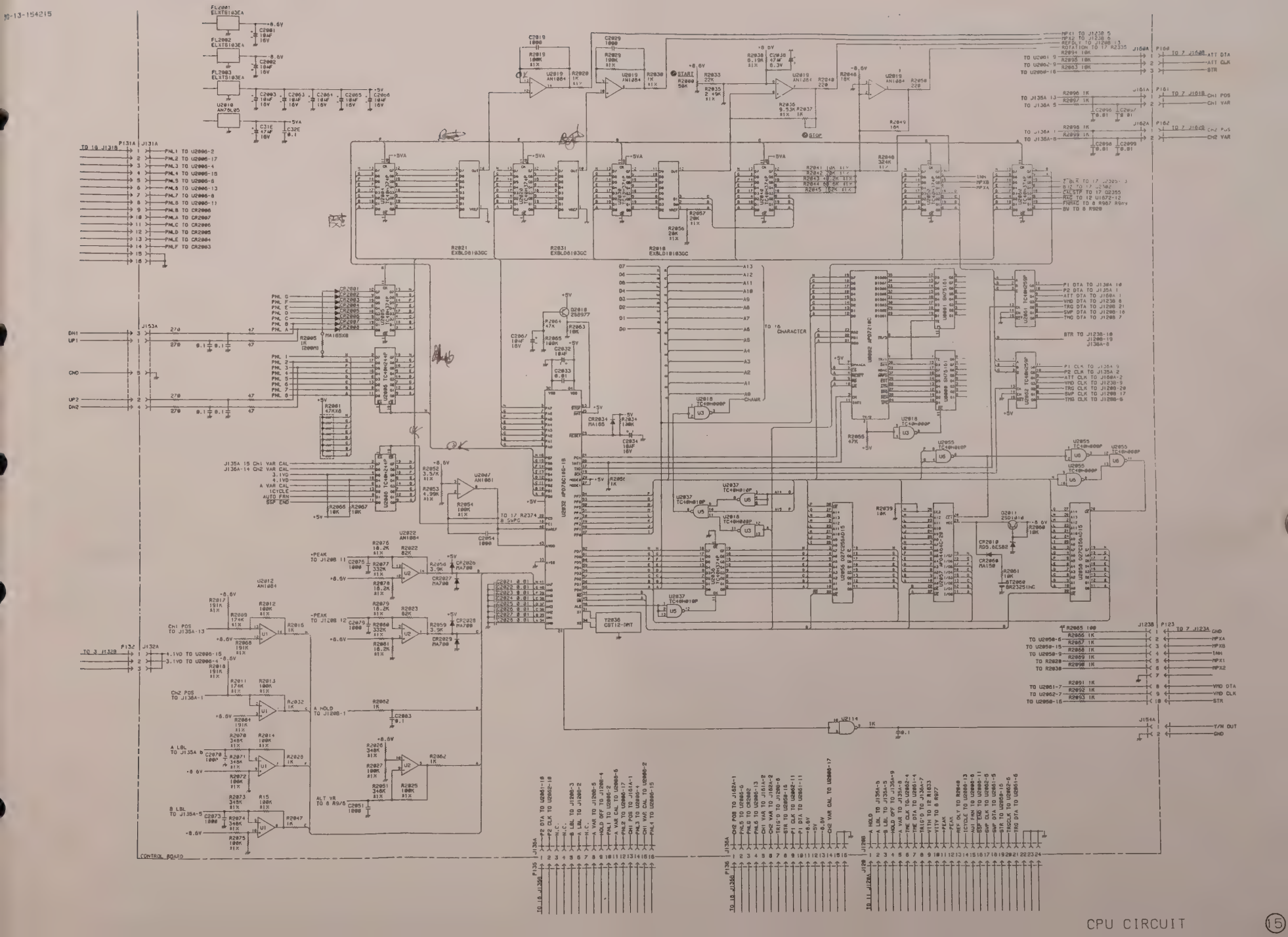


CONTROL BOARD

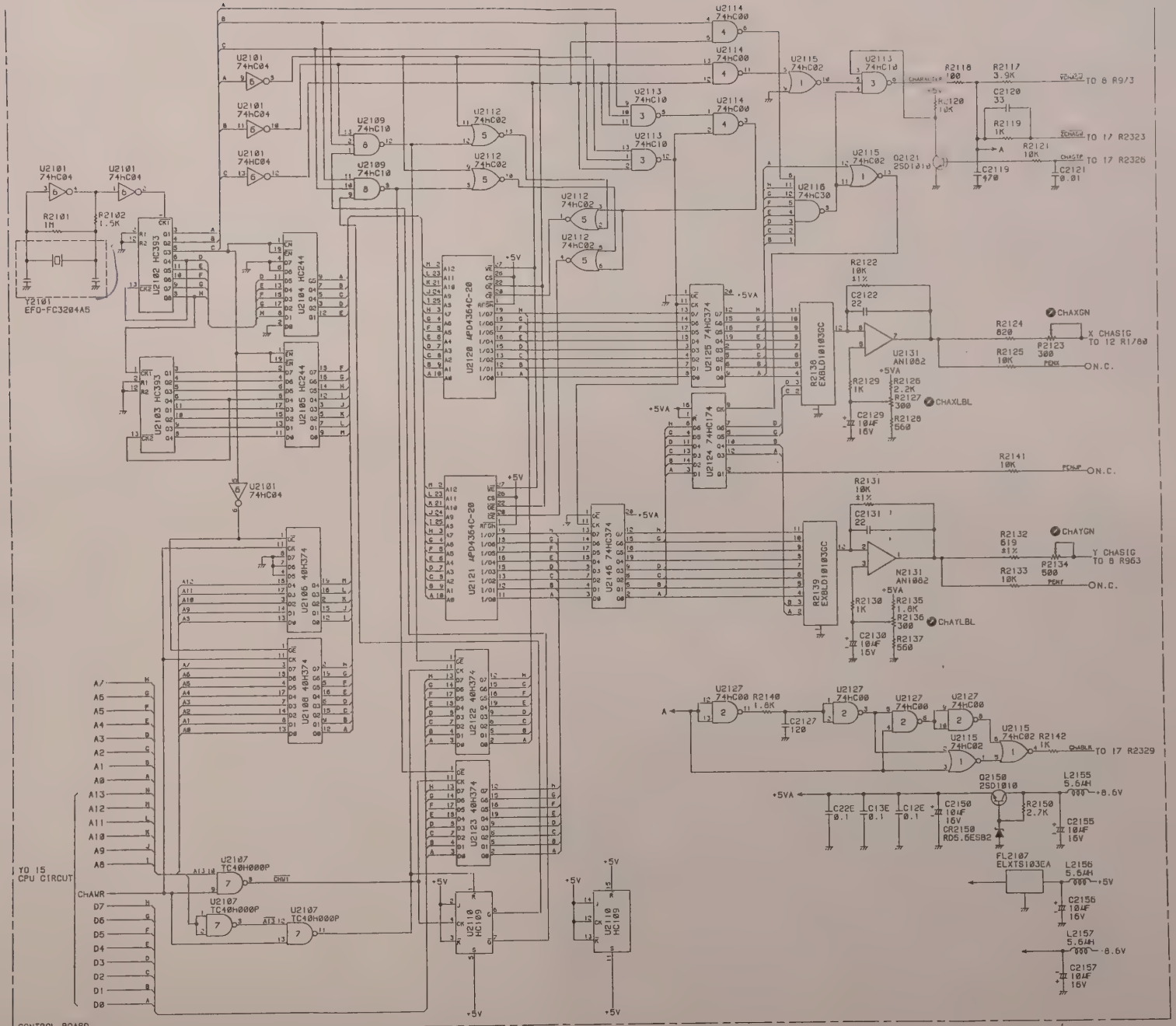

TO +11V
TO 14 Q1935-C
F1801
1A
R1803
2.2
1W
T1802
85T02
U1805
MSL4560
X10
C1800
47UF
16V
C1801
470UF
16V
D1801
2SD1273Q
R1808
180
TO GND
TO 14 C1936
C1804
0.047
C1802
0.022
R1809
2.2K
+8.6V
R1804
150K
U1801
AN1081
C1803
1000
+40V
-8.6V
C1805
150
2KV
R1824
167K
±1%
R2
R1
R1823
ERR-2GS101
R1814
470K
R1811
ERR-1SS101
R1812
10K
CR1805
ESJA56-05
C1807
4700
2KV
C1808
4700
2KV
C1809
4700
2KV
C1810
4700
2KV
C1814
4700
2KV
CR1817
1SS83TP
R1817
1.2K
C1830
0.01
500V
R1822
ERR-4GS101
R1820
2.2M
R1821
150K
Q1820
2SC2258
C1813
4700
2KV
Q1825
2SA1156
+8.6V
R1825
33K
Q1826
2SA1156
C1815
0.01
500V
FOCUS CENTER
R1828
100K
-8.6V
R1827
51K
R1826
100K
CRT BIAS
R1829
50K
-8.6V
+110V
ASTIG
R1830
100K
P153
J153A
N.C.
TO 17 J1538
Z INPUT
N.C.
N.C.
FOCUS
R1840
47
Q1840
2SC2901
CR1840
MA156
R1842
100
R1843
8.2K
R1845
3.3K
C1846
47
R1846
680
Q1847
2SC2901
+8.6V
+110V
CR1851
MA150TA
R1851
1.5K
R1852,
470
C1852
0.01
500V
R1853
75K
Q1852
2SA914-RS
C1851
0.01
500V
R1854
47
CR1852
1SS83TP
R1855
30.1K
±1%
R1856
30.1K
±1%
CR1855
MA162
CR1856
MA162
C1855
2
C1856
1
C1859
0.01
500V
R1857
62
C1857
0.01
R1850
820
CR1858
RD3.9EB2
R1858
680
Q1859
2SC2258
R1859
10
POWER BOARD
J150A
P150
N.C.
V1801
150DMB31
T1801
POTATION
TO 17 J133A
X: TO 12 R1721
Y: TO 8 L961
R1805
2.2K
R1815
10K
V1815
V1816
R1816
22M
CR1816
1SS83TP
CR1811
1SS83TP
C1812
4700
2KV
C1811
4700
2KV
CR1812
1SS83TP

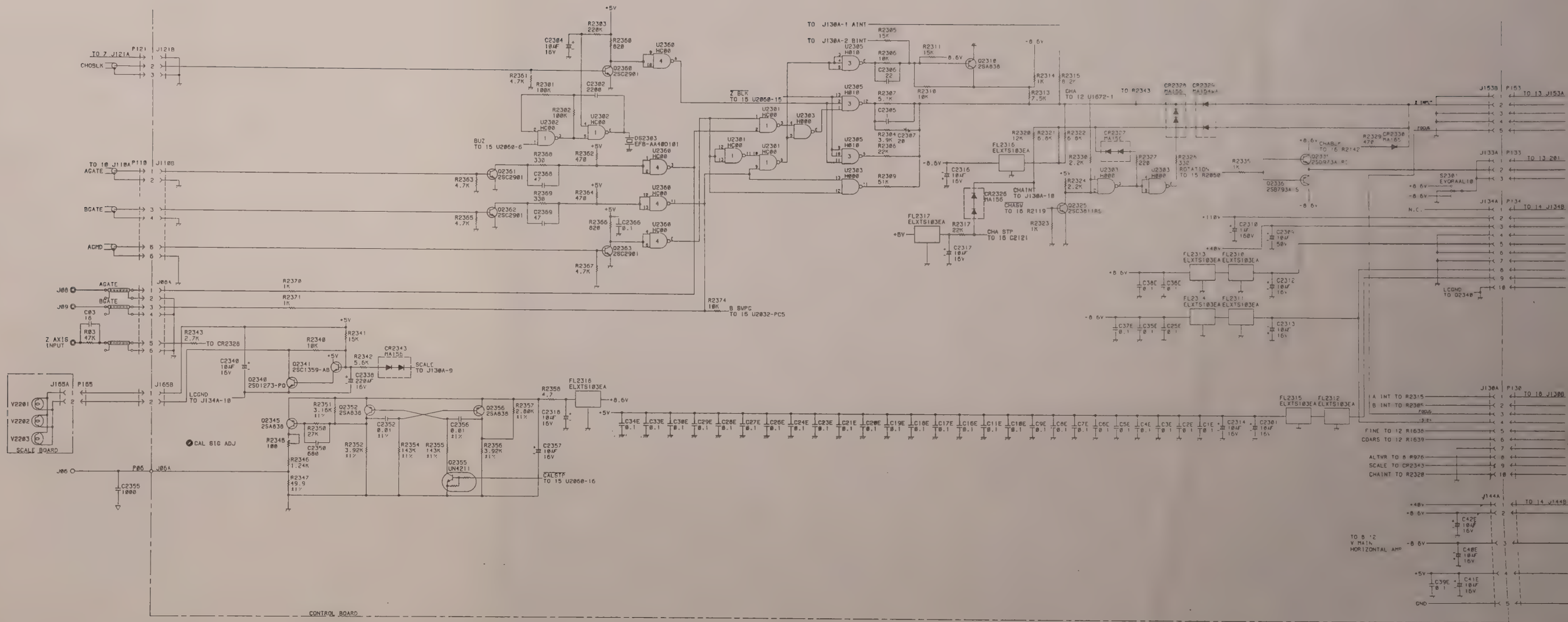
HV & Z AXIS

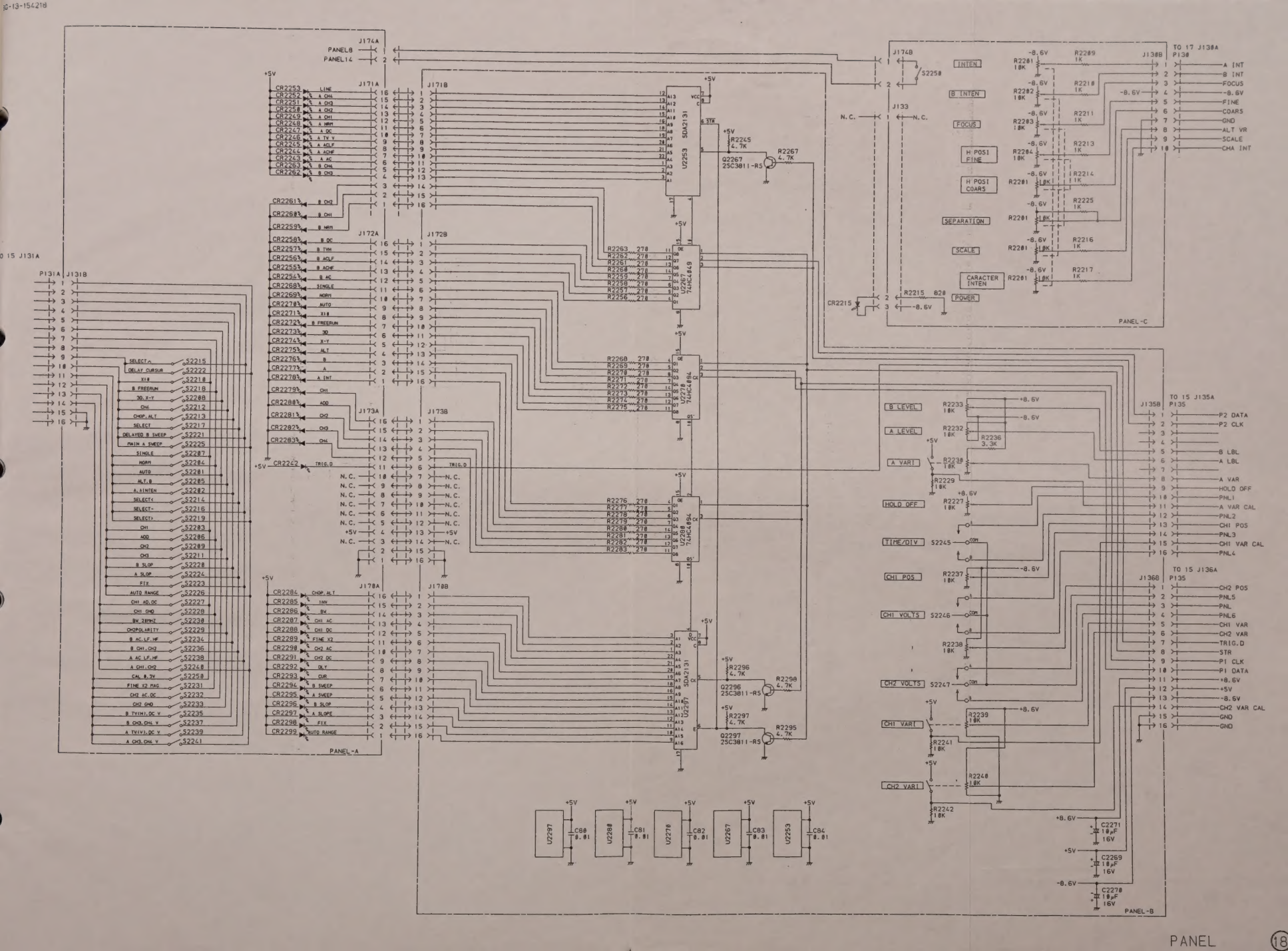

R1921 4.7K
+8.6V
C1921 10µF 16V
R1922 100K
R1924 100K
U1923 AN1081
R1925 100K
R1926 100
RT1917 PC617
R1927 47 1W
R1928 10
C1920 1µF 50V
R1923 100K
-8.6V
C1923 1µF 50V
B.P
CR1917 ERA22-08
110v
C1926 10µF 160v
40v
R1919 100K
R1903 47K 1W
R1904 47K 1W
CR1901 S1RBA60F
R1905 1M
R1906 1M
C1906 220µF 200v
C1907 220µF 200v
U1901 STK7408
C1905 2200 AC250V
L1902 4G431375
R1901 100
R1902 100
C1903 2200 AC250V
C1904 2200 AC250V
C1902 0.1 AC250V
L1901 4G431375
C1901 0.1 AC250V
F1902 126 C
J10A
S1901
F1901
R1900 470K 1/2W
J1901
AC90V-AC250 45Hz-440Hz
R1907 10 5W
CR1908 AC03FGM-CY
R1909 1M 1/2W
R1918 220K
R1908 220
R1910 12K
R1911 4.7K 3W
R1912 100K 2W
R1913 100K 2W
R1914 1.5K
R1916 22 3W
C1910 220µF 16V
C1911 220µF 16V
R1917 1 3W
R1915 2.2K
C1915 2200
T1901 67T04
C1914 150 3KV
C1912 0.01 500v
CR1911 V06E
CR1910 V06E
L1912 4.7µH
L1913 4.7µH
CR1925 ERA22-08
CR1926 ERA22-08
CR1927 ERA22-08
R1929 22 1W
Q1934 2SD1273-D
CR1929 MA165
R1934 40.2 ±1%
C1932 10µF 50v
R1930 4.7K
R1931 1K
C1931 1000
CR1930 RD36EB3
R1932 4.7K
U1931 AN1082
R1933 2.2K
C1927 100µF 160V
C1928 100µF 160V
C1929 100µF 160v
C1930 100µF 160v
TO 13 F1801
C1933 1000
CR1933 ESAB92M-02
L1934 125µH
C1934 1000µF 16V
C1935 1000µF 16V
Q1935 2SD1273-D
R1935 330
R1936 47
CR1935 MA165
R1937 100
C1925 0.01
R1939 8.66K ±1%
C1937 10µF 16V
CR1936 RD9.1EB2
C1936 1000
U1931 AN1082
R1938 2.2K
TO 13 Q1801
-8.6V ADJ
R1940 300
C1936 1000µF 16V
C1939 1000µF 16V
C1940 10µF 16V
R1941 2.21K ±1%
C1941 10µF 16V
CR1941 MA165
R1943 8.66K ±1%
R1944 8.66K ±1%
R1942 412 ±1%
L1938 125µH
U1940 LM337T
CR1942 ESAB92M-02
C1942 1000
C1943 1000
CR1943 ESAB92M-02
C1944 1000µF 10V
L1944 40µH
C1945 1000µF 10V
CR1920 MA165
RT1918 PC617
R1950 390
R1947 1K
CR1947 RD4.3EB2
C1946 1µF 50V
R1946 100
R1920 3.9K
RT1920 ERTD2FFL351S
R1948 430
POWER BOARD
J124B P124
1 LINE SYNC
2 +110v
3 +40v
4 GND
5 +8.6V
6 GND
7 GND
8 -8.6V
9 +5v
10 LGND
TO 5 J124A
J134B P134
1 LINE
2 +110v
3 +40v
4 GND
5 +8.6V
6 GND
7 GND
8 -8.6V
9 +5v
10 LGND
TO 17 J134A
J144B P144
1 +40V
2 +8.6V
3 -8.6V
4 +5v
5 GND
TO 17 J144A
1 +40V
2 +8.6V
3 -8.6V
4 +5v
5 GND

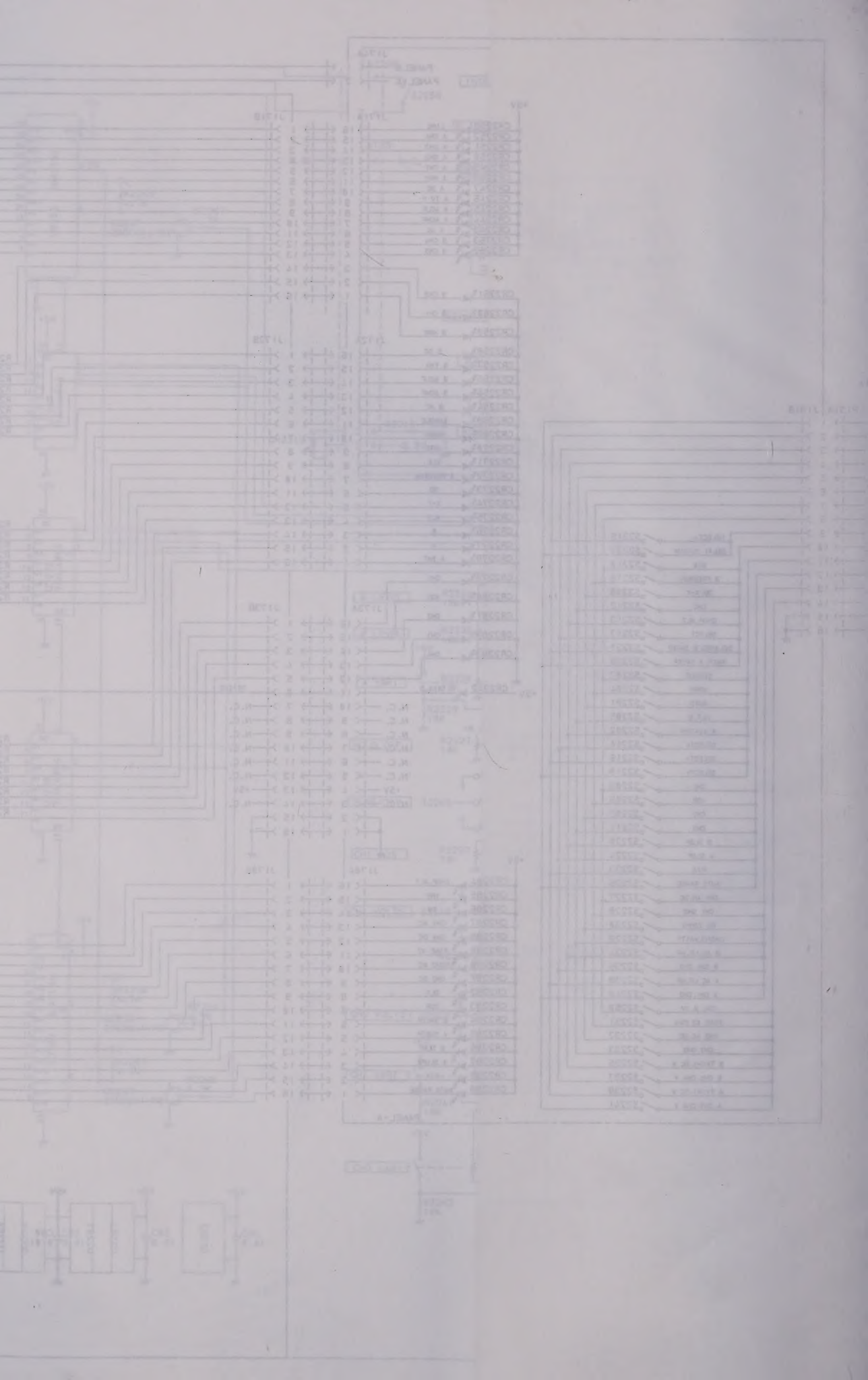


CPU CIRCUIT


U2101 74HC04
U2102 HC393
U2104 HC244
U2105 HC244
U2103 HC393
U2106 40H374
U2107 TC40H000P
U2109 74HC10
U2112 74HC02
U2113 74HC10
U2114 74HC00
U2115 74HC02
U2116 74HC30
U2120 UPD4364C-20
U2121 UPD4364C-20
U2122 40H374
U2123 40H374
U2124 74HC174
U2125 74HC374
U2126 74HC374
U2127 74HC00
U2131 AN1082
U2136 EXBLD1003GC
U2139 EXBLD1003GC
U2110 HC109
Y2101 EFO-FC3204A5
Q2121 2SD1010
Q2150 2SD1010
FL2107 ELXTS103EA
R2101 1M
R2102 1.5K
R2118 100
R2117 3.9K
R2119 1K
R2120 10K
R2121 10K
R2122 10K ±1%
R2124 820
R2125 10K
R2123 300
R2126 2.2K
R2127 300
R2128 560
R2129 1K
R2131 10K ±1%
R2132 619 ±1%
R2133 10K
R2134 500
R2135 1.6K
R2136 300
R2137 560
R2130 1K
R2140 1.8K
R2141 10K
R2142 1K
R2150 2.7K
C2120 33
C2119 470
C2121 0.01
C2122 22
C2129 10µF 16V
C2131 22
C2130 10µF 16V
C2127 120
C22E 0.1
C13E 0.1
C12E 0.1
C2150 10µF 16V
CR2150 RD5.6ES82
L2155 5.6µH
L2156 5.6µH
L2157 5.6µH
C2155 10µF 16V
C2156 10µF 16V
C2157 10µF 16V
+5V
+5VA
+8.6V
-8.6V
CHAXGN
CHAXLBL
CHAYGN
CHAYLBL
X CHASIG TO 12 R180
Y CHASIG TO 8 R963
TO 8 R973
TO 17 R2323
TO 17 R2326
TO 17 R2329
N.C.
TO YO 15 CPU CIRCUIT
CHAWR
CONTROL BOARD
CHARACTER


CONTROL BOARD
SCALE BOARD
CAL BIG ADJ
Z AXIS INPUT
TO 7 J121A
TO 10 J118A
CHOBLK
AGATE
BGATE
ACMD
BUZ
TO 15 U2060-6
Z BLK
TO 15 U2060-15
TO J130A-1 AINT
TO J130A-2 BINT
CHA
TO 12 U1672-1
CHAINT
TO J130A-18
CHASW
TO 15 R2119
CHA STP
TO 15 C2121
CHABLF
TO 15 R2142
ROTATION
TO 15 R2050
B SWPC
TO 15 U2032-PC5
SCALE
TO J130A-9
LCGND
TO J134A-10
CALSTR
TO 15 U2060-16
TO R2343
TO CR2328
TO 13 J153A
TO 13 J33A
TO 14 J134B
TO 18 J130B
TO 14 J144B
A INT TO R2315
B INT TO R2305
FINE TO 12 R1636
COARS TO 12 R1639
ALTVR TO 8 R976
SCALE TO CR2343
CHAINT TO R2328
TO 8 '2
V MAIN
HORIZONTAL AMP


PANEL-A
PANEL-B
PANEL-C
J174A
PANEL8
PANEL14
J171A
J171B
J172A
J172B
J173A
J173B
J178A
J178B
J174B
J133
J138B
TO 17 J138A
P138
A INT
B INT
FOCUS
-8.6V
FINE
COARS
GND
ALT VR
SCALE
CHA INT
INTEN
B INTEN
FOCUS
H POSI FINE
H POSI COARS
SEPARATION
SCALE
CARACTER INTEN
POWER
S2258
R2215 820
CR2215
J131A
P131A
J131B
TO 15 J131A
SELECT^
DELAY CURSUR
X18
B FREERUN
3D, X-Y
CH4
CHOP. ALT
SELECT
DELAYED B SWEEP
MAIN A SWEEP
SINGLE
NORM
AUTO
ALT. B
A INTEN
SELECT<
SELECT-
SELECT>
CH1
ADD
CH2
CH3
B SLOP
A SLOP
FIX
AUTO RANGE
CH1 AD. DC
CH1 GND
BW 20MHZ
CH2POLARITY
B AC LF. HF
B CH1. CH2
A AC LF. HF
A CH1. CH2
CAL 8.3V
FINE X2 MAG
CH2 AC. DC
CH2 GND
B TV(H). DC V
B CH3. CH4 V
A TV(V). DC V
A CH3. CH4 V
U2253 SDA2131
U2267 74HC4949
U2278 74HC4894
U2288 74HC4894
U2297 SDA2131
Q2267 2SC3811-R5
Q2296 2SC3811-R5
Q2297 2SC3811-R5
R2245 4.7K
R2267 4.7K
R2296 4.7K
R2298 4.7K
R2297 4.7K
R2295 4.7K
TRIG.D
N.C.
STR
B LEVEL
A LEVEL
A VARI
HOLD OFF
TIME/DIV
CH1 POS
CH1 VOLTS
CH2 VOLTS
CH1 VARI
CH2 VARI
R2233 10K
R2232 10K
R2236 3.3K
R2239 10K
R2229 10K
R2227 10K
R2237 10K
R2238 10K
R2239 10K
R2241 10K
R2240 10K
R2242 10K
S2245
S2246
S2247
J135B
TO 15 J135A
P135
P2 DATA
P2 CLK
B LBL
A LBL
A VAR
HOLD OFF
PNL1
A VAR CAL
PNL2
CH1 POS
PNL3
CH1 VAR CAL
PNL4
J136B
TO 15 J136A
CH2 POS
PNL5
PNL
PNL6
CH1 VAR
CH2 VAR
TRIG.D
STR
P1 CLK
P1 DATA
+8.6V
+5V
-8.6V
CH2 VAR CAL
GND
GND
C2271 10μF 16V
C2269 10μF 16V
C2270 10μF 16V
C80 0.01
C81 0.01
C82 0.01
C83 0.01
C84 0.01



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